

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

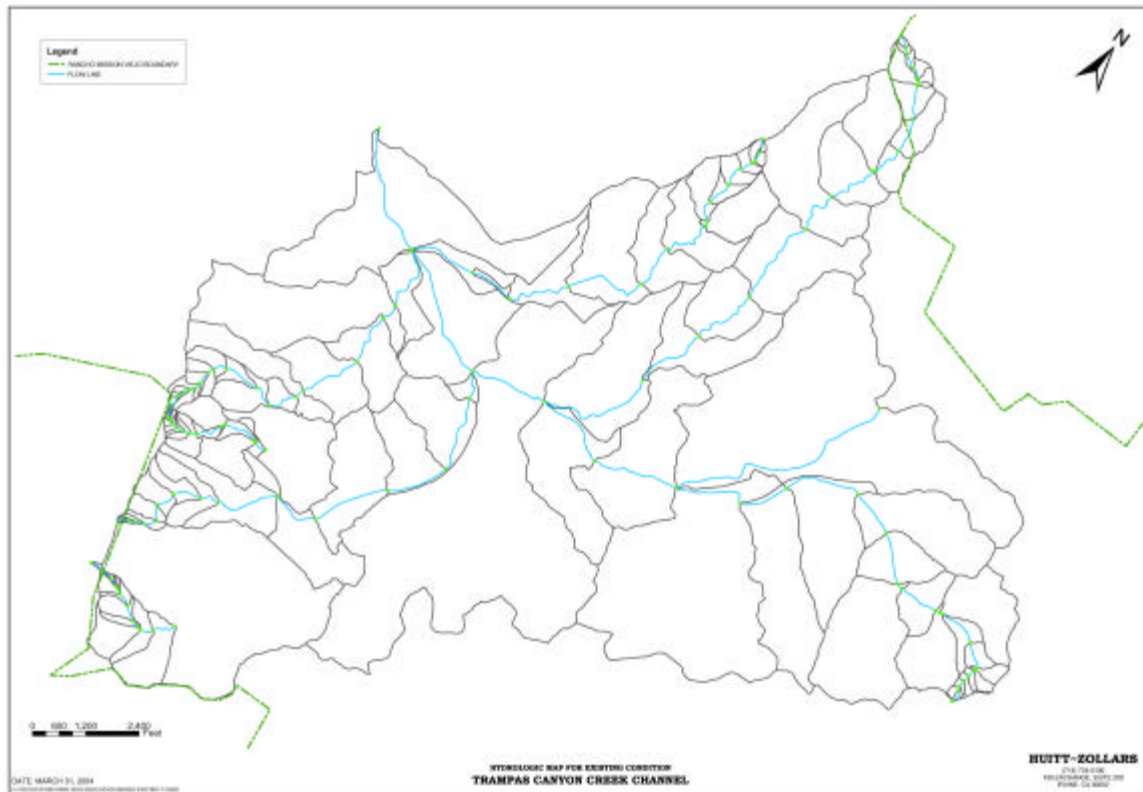
HYDROLOGIC REPORT TO THE BASELINE HYDROLOGIC CONDITIONS TRAMPAS CANYON

PREPARED FOR



RANCHO MISSION VIEJO

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VOLUME III

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INTRODUCTION

A Hydrology Report for the Trampas Canyon of the San Juan Creek system has been completed to the confluence with San Juan Creek. The watershed will be significantly altered by proposed development. In the existing condition, two reservoirs without outlets intercept flows in the canyon prior to San Juan Creek. Therefore, at the confluence with San Juan Creek, Trampas Canyon only conveys flows from approximately 327 acres in the existing condition. In the proposed condition, two reservoirs will be eliminated and Trampas Canyon will convey flows from approximately 823 acres to a proposed reservoir near San Juan Creek. The watershed elevations range from approximately 240 feet above sea level at the downstream confluence to approximately 1,110 feet above sea level at the headwaters.

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

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MODEL OVERVIEW

Rational method models were completed for both the existing and proposed condition models. Additionally, to determine the volume requirements for the proposed reservoir, a multi-day hydrograph analysis was also prepared for the proposed condition.

To model the 100-Year High Confidence analysis, both the Advanced Engineering Software RATSCx and FLOODSCx programs were utilized. The RATSCx program was used to develop the rational method analysis and the FLOODSCx program was used to develop the multi-day hydrographs analysis. The hydrograph was based on data calculated both from the rational method analysis and from other tabulations of rainfall and land use / soil type combinations. The time of concentration (T_c) from the rational method was used to calculate the basin lag at the hydrograph location. A five day storm pattern was developed for the multi-day analysis based on the guidelines from the Orange County Hydrology Manual.

Since in the existing condition, Trampas Canyon only conveys flows from approximately 327 acres, only a rational method study was completed for the canyon.

In the proposed condition, Trampas Canyon conveys flows from approximately 823 acres. Additionally, a reservoir is proposed to intercept all flows in the canyon prior to reaching San Juan Creek. Therefore, both a rational method analysis, for parameter, and a multi-day hydrograph analysis were prepared for the proposed condition. Since no outlet is proposed for the reservoir, flood routing through a basin was not required. Rather, the reservoir will be designed to intercept the entire storm runoff volume for the multi-day event.

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ASSUMPTIONS

Base Maps and Topographic Data

The base map for the existing condition model was created using aerial topography with 2-foot, 5-foot and 10-foot contours. The base map for the proposed condition utilized mass grade topographic information that was spliced into existing aerial topography for each of the proposed development bubbles.

Rainfall

100-Year High Confidence rainfall intensities and depths were derived from the Orange County Hydrology Manual. The Non-Mountainous rainfall zone, for areas below the 2000' elevation was utilized.

Land Use

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

Hydrologic Soils

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

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Antecedent Moisture Condition

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

Depth Area Adjustments

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

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LAND USE MAPPING

Land Use Sub-Category	Hydrologic Land Use
General Transportation	Commercial
General Urban Commercial	Commercial
Multiple Family Residential	11 Dwellings/Acre
General Developed Areas	5-7 Dwellings/Acre
Single Family Residential	3-4 Dwellings/Acre
Fluctuating Shoreline	Public Park
Lakes/Open Water	Public Park
General Disturbed Areas	Barren (Poor)
Broadleaf Chaparral	Chaparral, Broadleaf (Fair)
Broadleaf Chaparral and Sage	Chaparral, Broadleaf (Fair)
Chaparral – Sage Scrub	Chaparral, Broadleaf (Fair)
General Chaparral	Chaparral, Broadleaf (Fair)
Rural Residential	Chaparral, Broadleaf (Fair)
Narrowleaf Chaparral	Chaparral, Narrowleaf (Fair)
General Grassland	Grass (Fair)
Live Oak Savanna	Grass (Fair)
Sumac Savanna	Grass (Fair)
Disturbed Wetlands	Meadows or Cienegas (Fair)
Meadow and Marsh	Meadows or Cienegas (Good)
Flood Control Channels	Open Brush (Fair)
General Sage Scrub	Open Brush (Fair)
Riparian Willow	Open Brush (Fair)
Rock with Plants	Open Brush (Fair)
Sage Scrub- Grassland	Open Brush (Fair)
Streams and Creeks	Open Brush (Fair)
Forest	Woodland (Fair)
Woodland and Riparian	Woodland (Fair)
General Agriculture	Fallow (Poor)
General Nurseries	Orchards, Evergreen (Fair)
General Orchards	Orchards, Evergreen (Fair)
General Pastures	Pasture, Dryland (Fair)
Irrigated Row Crops	Pasture, Dryland (Fair)
Row Crops	Pasture, Dryland (Fair)
General Parks	Turf (Fair)

Table 1 – Land Use Mapping

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S-Graphs

S-Graph proportions were assigned based on a review of topographic and land use data, as well as aerial photography. Generally, the rugged terrain in the upper portions of the watershed was assigned to a "Mountain" S-Graph, while the lower portions were assigned "Foothill" and "Valley" S-Graphs. For the proposed condition analysis, development bubble areas were assumed to change from "Valley – Undeveloped" to "Valley – Developed".

Channel Geometry

Channel geometry was determined based on estimated cross-sections taken from the topographic data at several locations. Channel sizes were incrementally increased as the model moved downstream. Channels were sized to convey the 100-Year High Confidence peak flow rates without overtopping. Additionally, the 100-Year High Confidence analysis was used as the determining factor in insuring that travel times for individual reaches met the County criteria outlined in the Hydrology Manual on pages D-12 and D-15.

Sub-Areas

In general, sub-areas were developed so that the sub-area sizes gradually increased as the study progressed downstream. Concentration nodes were located at major confluences or other points of significance. Generally these concentration nodes defined the subareas rather than the subarea size defining a concentration node.

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CONCLUSIONS

Hydrologic Results

The results of the hydrologic analyses of Trampas Canyon at San Juan Creek are presented in Table 2.

Impact of Proposed Development

Although two reservoirs are proposed to be removed from Trampas Canyon, another proposed reservoir will intercept and store all flows from within the canyon. Therefore, flows reaching San Juan Creek from Trampas Canyon will be reduced from their existing level to zero.

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HYDROLOGIC SUMMARY – 100-YEAR – HIGH CONFIDENCE

Existing Condition

Node	Location	Total Area		Tc (min)	Rational Flow Rate (cfs)	Hydrograph Flow Rate (cfs)	Multi-Day Volume (ac-ft)
		(ac)	(sq. mi.)				
1354	San Juan Creek	327	0.53	27.14	618		

Proposed Condition

Node	Location	Total Area		Tc (min)	Rational Flow Rate (cfs)	Hydrograph Flow Rate (cfs)	Multi-Day Volume (ac-ft)
		(ac)	(sq. mi.)				
1375	San Juan Creek	823	1.29	25.63	1,435	1,324	320

Table 2 – Hydrologic Summary – 100-Year-High Confidence

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**TECHNICAL APPENDIX III-A
HYDROLOGIC ANALYSIS
EXISTING CONDITION
100-YEAR HIGH CONFIDENCE**

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

Analysis prepared by:

Huitt - Zollars, Inc.
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Irvine, CA. 92602-1309
714 - 734 - 5100

***** DESCRIPTION OF STUDY *****
* AREA 13 - EXISTING *
* 100-YEAR HIGH CONFIDENCE *
* AREAS DRAINING TO SAN JUAN CREEK *
*****

FILE NAME: CE13100H.DAT
TIME/DATE OF STUDY: 10:10 05/29/2004
=====
USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
=====
--*TIME-OF-CONCENTRATION MODEL*--

USER SPECIFIED STORM EVENT (YEAR) = 100.00
SPECIFIED MINIMUM PIPE SIZE (INCH) = 18.00
SPECIFIED PERCENT OF GRADIENTS (DECIMAL) TO USE FOR FRICTION SLOPE = 0.90
*DATA BANK RAINFALL USED*
*ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR RATIONAL METHOD*

*USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
  HALF- CROWN TO STREET-CROSSFALL: CURB GUTTER-GEOMETRIES: MANNING
  WIDTH CROSSFALL IN- / OUT-/PARK- HEIGHT WIDTH LIP HIKE FACTOR
NO. (FT) (FT) SIDE / SIDE/ WAY (FT) (FT) (FT) (n)
===  ===  =====  =====  =====  =====  =====  =====
1  30.0  20.0  0.018/0.018/0.020  0.67  2.00  0.0313  0.167  0.0150

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

UNIT-HYDROGRAPH MODEL SELECTIONS/PARAMETERS:
WATERSHED LAG = 0.80 * Tc
S-GRAPH TYPE PERCENTAGE (DECIMAL)
VALLEY (DEVELOPED) 0.020
FOOTHILL 0.080
MOUNTAIN 0.040
VALLEY (UNDEVELOPED) / DESERT 0.860
DESERT (UNDEVELOPED) 0.000
SIERRA MADRE DEPTH-AREA FACTORS USED.
AREA-AVERAGED
DURATION RAINFALL (INCH)
5-MINUTES 0.52
30-MINUTES 1.09
1-HOUR 1.45
3-HOUR 2.43
6-HOUR 3.36
24-HOUR 5.63
*ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*

*****
FLOW PROCESS FROM NODE 1300.00 TO NODE 1301.00 IS CODE = 21
-----
>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====
INITIAL SUBAREA FLOW-LENGTH (FEET) = 327.00
ELEVATION DATA: UPSTREAM (FEET) = 927.00 DOWNSTREAM (FEET) = 750.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

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SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.090
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.696
SUBAREA Tc AND LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.50 0.25 1.00 75 8.09
NATURAL FAIR COVER
"OPEN BRUSH" D 0.20 0.20 1.00 83 8.09
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA RUNOFF (CFS) = 2.81
TOTAL AREA (ACRES) = 0.70 PEAK FLOW RATE (CFS) = 2.81

*****
FLOW PROCESS FROM NODE 1301.00 TO NODE 1302.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM (FEET) = 750.00 DOWNSTREAM (FEET) = 715.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 99.00 CHANNEL SLOPE = 0.3535
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 2.81
FLOW VELOCITY (FEET/SEC.) = 7.67 FLOW DEPTH (FEET) = 0.29
TRAVEL TIME (MIN.) = 0.22 Tc (MIN.) = 8.30
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1302.00 = 426.00 FEET.

*****
FLOW PROCESS FROM NODE 1301.00 TO NODE 1302.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc (MIN) = 8.30
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.662
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 0.20 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.80 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 0.20 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.20 SUBAREA RUNOFF (CFS) = 4.81
EFFECTIVE AREA (ACRES) = 1.90 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 1.90 PEAK FLOW RATE (CFS) = 7.60

*****
FLOW PROCESS FROM NODE 1302.00 TO NODE 1303.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM (FEET) = 715.00 DOWNSTREAM (FEET) = 665.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 168.00 CHANNEL SLOPE = 0.2976
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 7.60
FLOW VELOCITY (FEET/SEC.) = 9.53 FLOW DEPTH (FEET) = 0.52
TRAVEL TIME (MIN.) = 0.29 Tc (MIN.) = 8.60
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1303.00 = 594.00 FEET.

*****
FLOW PROCESS FROM NODE 1302.00 TO NODE 1303.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc (MIN) = 8.60
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.575
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.10 0.25 1.00 75

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NATURAL FAIR COVER
"OPEN BRUSH"      C      0.10  0.25  1.00  77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D    0.50  0.20  1.00  81
NATURAL FAIR COVER
"OPEN BRUSH"      D    0.50  0.20  1.00  83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.20 SUBAREA RUNOFF (CFS) = 4.72
EFFECTIVE AREA (ACRES) = 3.10 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 3.10 PEAK FLOW RATE (CFS) = 12.16

*****
FLOW PROCESS FROM NODE 1303.00 TO NODE 1304.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 665.00 DOWNSTREAM (FEET) = 635.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 145.00 CHANNEL SLOPE = 0.2069
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 12.16
FLOW VELOCITY (FEET/SEC.) = 9.40 FLOW DEPTH (FEET) = 0.74
TRAVEL TIME (MIN.) = 0.26 Tc (MIN.) = 8.86
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1304.00 = 739.00 FEET.

*****
FLOW PROCESS FROM NODE 1303.00 TO NODE 1304.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 8.86
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.499
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE           GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C    0.10  0.25  1.00  75
NATURAL FAIR COVER
"OPEN BRUSH"        C    0.80  0.25  1.00  77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D    0.20  0.20  1.00  81
NATURAL FAIR COVER
"OPEN BRUSH"        D    1.00  0.20  1.00  83
NATURAL FAIR COVER
"WOODLAND"         D    0.10  0.20  1.00  79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.20 SUBAREA RUNOFF (CFS) = 8.47
EFFECTIVE AREA (ACRES) = 5.30 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 5.30 PEAK FLOW RATE (CFS) = 20.42

*****
FLOW PROCESS FROM NODE 1304.00 TO NODE 1305.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 635.00 DOWNSTREAM (FEET) = 605.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 176.00 CHANNEL SLOPE = 0.1705
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 20.42
FLOW VELOCITY (FEET/SEC.) = 9.74 FLOW DEPTH (FEET) = 0.76
TRAVEL TIME (MIN.) = 0.30 Tc (MIN.) = 9.16
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1305.00 = 915.00 FEET.

*****
FLOW PROCESS FROM NODE 1304.00 TO NODE 1305.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 9.16
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.409
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS

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LAND USE           GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"      C      0.20  0.25  1.00  77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D    0.50  0.20  1.00  81
NATURAL FAIR COVER
"OPEN BRUSH"      D    0.90  0.20  1.00  83
NATURAL FAIR COVER
"WOODLAND"       D    0.20  0.20  1.00  79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.80 SUBAREA RUNOFF (CFS) = 6.81
EFFECTIVE AREA (ACRES) = 7.10 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 7.10 PEAK FLOW RATE (CFS) = 26.81

*****
FLOW PROCESS FROM NODE 1305.00 TO NODE 1306.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 605.00 DOWNSTREAM (FEET) = 603.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 31.00 CHANNEL SLOPE = 0.0645
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 26.81
FLOW VELOCITY (FEET/SEC.) = 7.36 FLOW DEPTH (FEET) = 1.15
TRAVEL TIME (MIN.) = 0.07 Tc (MIN.) = 9.23
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1306.00 = 946.00 FEET.

*****
FLOW PROCESS FROM NODE 1305.00 TO NODE 1306.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 9.23
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.389
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE           GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C    0.40  0.25  1.00  75
NATURAL FAIR COVER
"OPEN BRUSH"        C    0.50  0.25  1.00  77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D    1.60  0.20  1.00  81
NATURAL FAIR COVER
"OPEN BRUSH"        D    0.30  0.20  1.00  83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.80 SUBAREA RUNOFF (CFS) = 10.51
EFFECTIVE AREA (ACRES) = 9.90 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 9.90 PEAK FLOW RATE (CFS) = 37.19

*****
FLOW PROCESS FROM NODE 1306.00 TO NODE 1307.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 603.00 DOWNSTREAM (FEET) = 600.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 68.00 CHANNEL SLOPE = 0.0441
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 37.19
FLOW VELOCITY (FEET/SEC.) = 6.98 FLOW DEPTH (FEET) = 1.52
TRAVEL TIME (MIN.) = 0.16 Tc (MIN.) = 9.39
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1307.00 = 1014.00 FEET.

*****
FLOW PROCESS FROM NODE 1306.00 TO NODE 1307.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 9.39
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.341
SUBAREA LOSS RATE DATA (AMC II):

```

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"OPEN BRUSH"	C	0.40	0.25	1.00	77
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	D	0.50	0.20	1.00	81
NATURAL FAIR COVER					
"OPEN BRUSH"	D	3.40	0.20	1.00	83
NATURAL FAIR COVER					
"WOODLAND"	D	0.10	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 4.40 SUBAREA RUNOFF (CFS) = 16.38					
EFFECTIVE AREA (ACRES) = 14.30 AREA-AVERAGED Fm (INCH/HR) = 0.21					
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00					
TOTAL AREA (ACRES) = 14.30 PEAK FLOW RATE (CFS) = 53.14					

FLOW PROCESS FROM NODE 1307.00 TO NODE 1308.00 IS CODE = 51					

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<					
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<					

ELEVATION DATA: UPSTREAM (FEET) = 600.00 DOWNSTREAM (FEET) = 550.00					
CHANNEL LENGTH THRU SUBAREA (FEET) = 598.00 CHANNEL SLOPE = 0.0836					
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000					
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00					
CHANNEL FLOW THRU SUBAREA (CFS) = 53.14					
FLOW VELOCITY (FEET/SEC.) = 9.71 FLOW DEPTH (FEET) = 1.54					
TRAVEL TIME (MIN.) = 1.03 Tc (MIN.) = 10.42					
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1308.00 = 1612.00 FEET.					

FLOW PROCESS FROM NODE 1307.00 TO NODE 1308.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<					

MAINLINE Tc (MIN) = 10.42					
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.077					
SUBAREA LOSS RATE DATA (AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"OPEN BRUSH"	C	0.60	0.25	1.00	77
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	D	1.40	0.20	1.00	81
NATURAL FAIR COVER					
"OPEN BRUSH"	D	3.80	0.20	1.00	83
NATURAL FAIR COVER					
"WOODLAND"	D	1.00	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 6.80 SUBAREA RUNOFF (CFS) = 23.70					
EFFECTIVE AREA (ACRES) = 21.10 AREA-AVERAGED Fm (INCH/HR) = 0.21					
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00					
TOTAL AREA (ACRES) = 21.10 PEAK FLOW RATE (CFS) = 73.44					

FLOW PROCESS FROM NODE 1308.00 TO NODE 1309.00 IS CODE = 51					

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<					
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<					

ELEVATION DATA: UPSTREAM (FEET) = 550.00 DOWNSTREAM (FEET) = 490.00					
CHANNEL LENGTH THRU SUBAREA (FEET) = 952.00 CHANNEL SLOPE = 0.0630					
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000					
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00					
CHANNEL FLOW THRU SUBAREA (CFS) = 73.44					
FLOW VELOCITY (FEET/SEC.) = 9.49 FLOW DEPTH (FEET) = 1.96					
TRAVEL TIME (MIN.) = 1.67 Tc (MIN.) = 12.09					
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1309.00 = 2564.00 FEET.					

FLOW PROCESS FROM NODE 1308.00 TO NODE 1309.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<					

MAINLINE Tc (MIN) = 12.09					
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.742					

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	B	0.10	0.30	1.00	63
NATURAL FAIR COVER					
"OPEN BRUSH"	B	0.10	0.30	1.00	66
NATURAL FAIR COVER					
"WOODLAND"	B	0.20	0.30	1.00	60
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	C	0.10	0.25	1.00	75
NATURAL FAIR COVER					
"OPEN BRUSH"	C	0.80	0.25	1.00	77
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	D	4.70	0.20	1.00	81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 6.00 SUBAREA RUNOFF (CFS) = 19.05					
EFFECTIVE AREA (ACRES) = 27.10 AREA-AVERAGED Fm (INCH/HR) = 0.21					
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00					
TOTAL AREA (ACRES) = 27.10 PEAK FLOW RATE (CFS) = 86.15					

FLOW PROCESS FROM NODE 1308.00 TO NODE 1309.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<					

MAINLINE Tc (MIN) = 12.09					
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.742					
SUBAREA LOSS RATE DATA (AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"OPEN BRUSH"	D	3.50	0.20	1.00	83
NATURAL FAIR COVER					
"WOODLAND"	D	1.60	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 5.10 SUBAREA RUNOFF (CFS) = 16.26					
EFFECTIVE AREA (ACRES) = 32.20 AREA-AVERAGED Fm (INCH/HR) = 0.21					
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00					
TOTAL AREA (ACRES) = 32.20 PEAK FLOW RATE (CFS) = 102.41					

FLOW PROCESS FROM NODE 1309.00 TO NODE 1310.00 IS CODE = 51					

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<					
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<					

ELEVATION DATA: UPSTREAM (FEET) = 490.00 DOWNSTREAM (FEET) = 485.00					
CHANNEL LENGTH THRU SUBAREA (FEET) = 83.00 CHANNEL SLOPE = 0.0602					
CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000					
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00					
CHANNEL FLOW THRU SUBAREA (CFS) = 102.41					
FLOW VELOCITY (FEET/SEC.) = 10.11 FLOW DEPTH (FEET) = 2.02					
TRAVEL TIME (MIN.) = 0.14 Tc (MIN.) = 12.22					
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1310.00 = 2647.00 FEET.					

FLOW PROCESS FROM NODE 1309.00 TO NODE 1310.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<					

MAINLINE Tc (MIN) = 12.22					
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.715					
SUBAREA LOSS RATE DATA (AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	B	1.80	0.30	1.00	63
NATURAL FAIR COVER					
"WOODLAND"	B	0.20	0.30	1.00	60
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	C	8.00	0.25	1.00	75
NATURAL FAIR COVER					
"OPEN BRUSH"	C	8.90	0.25	1.00	77
NATURAL FAIR COVER					
"WOODLAND"	C	2.40	0.25	1.00	73
NATURAL FAIR COVER					

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"CHAPARRAL,BROADLEAF" D 22.50 0.20 1.00 81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 43.80 SUBAREA RUNOFF (CFS) = 137.51
EFFECTIVE AREA (ACRES) = 76.00 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 76.00 PEAK FLOW RATE (CFS) = 239.13

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FLOW PROCESS FROM NODE 1309.00 TO NODE 1310.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 12.22
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.715
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" D 2.10 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 2.20 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 4.30 SUBAREA RUNOFF (CFS) = 13.60
EFFECTIVE AREA (ACRES) = 80.30 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 80.30 PEAK FLOW RATE (CFS) = 252.73

*****
FLOW PROCESS FROM NODE 1310.00 TO NODE 1311.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 485.00 DOWNSTREAM (FEET) = 480.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 108.00 CHANNEL SLOPE = 0.0463
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 252.73
FLOW VELOCITY (FEET/SEC.) = 11.48 FLOW DEPTH (FEET) = 3.10
TRAVEL TIME (MIN.) = 0.16 Tc (MIN.) = 12.38
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1311.00 = 2755.00 FEET.

*****
FLOW PROCESS FROM NODE 1310.00 TO NODE 1311.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 12.38
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.684
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" B 0.20 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 0.40 0.30 1.00 66
NATURAL FAIR COVER
"WOODLAND" B 0.10 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 12.10 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.60 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 2.60 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 16.00 SUBAREA RUNOFF (CFS) = 49.41
EFFECTIVE AREA (ACRES) = 96.30 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 96.30 PEAK FLOW RATE (CFS) = 299.88

*****
FLOW PROCESS FROM NODE 1310.00 TO NODE 1311.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 12.38

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* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.684
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 14.50 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 6.90 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 2.30 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 23.70 SUBAREA RUNOFF (CFS) = 74.31
EFFECTIVE AREA (ACRES) = 120.00 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 120.00 PEAK FLOW RATE (CFS) = 374.18

*****
FLOW PROCESS FROM NODE 1311.00 TO NODE 1312.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 480.00 DOWNSTREAM (FEET) = 445.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 925.00 CHANNEL SLOPE = 0.0378
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 374.18
FLOW VELOCITY (FEET/SEC.) = 11.78 FLOW DEPTH (FEET) = 3.98
TRAVEL TIME (MIN.) = 1.31 Tc (MIN.) = 13.69
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1312.00 = 3680.00 FEET.

*****
FLOW PROCESS FROM NODE 1311.00 TO NODE 1312.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 13.69
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.489
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" B 2.70 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 0.60 0.30 1.00 66
NATURAL FAIR COVER
"WOODLAND" B 0.40 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 8.70 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 3.90 0.25 1.00 77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 16.70 SUBAREA RUNOFF (CFS) = 48.51
EFFECTIVE AREA (ACRES) = 136.70 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 136.70 PEAK FLOW RATE (CFS) = 401.63

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FLOW PROCESS FROM NODE 1311.00 TO NODE 1312.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 13.69
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.489
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" C 3.00 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.60 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 4.10 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00

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SUBAREA AREA(ACRES) = 7.70 SUBAREA RUNOFF(CFS) = 22.66
EFFECTIVE AREA(ACRES) = 144.40 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 144.40 PEAK FLOW RATE(CFS) = 424.29

FLOW PROCESS FROM NODE 1312.00 TO NODE 1313.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 445.00 DOWNSTREAM(FEET) = 440.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 154.00 CHANNEL SLOPE = 0.0325
CHANNEL BASE(FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 5.00
CHANNEL FLOW THRU SUBAREA(CFS) = 424.29
FLOW VELOCITY(FEET/SEC.) = 11.46 FLOW DEPTH(FEET) = 4.08
TRAVEL TIME(MIN.) = 0.22 Tc(MIN.) = 13.91
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1313.00 = 3834.00 FEET.

FLOW PROCESS FROM NODE 1312.00 TO NODE 1313.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 13.91
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.456
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 0.20 0.30 1.00 63
NATURAL FAIR COVER
"GRASS" B 0.90 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 1.60 0.30 1.00 66
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 31.60 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 2.20 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 11.70 0.25 1.00 77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 48.20 SUBAREA RUNOFF(CFS) = 138.97
EFFECTIVE AREA(ACRES) = 192.60 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 192.60 PEAK FLOW RATE(CFS) = 559.06

FLOW PROCESS FROM NODE 1312.00 TO NODE 1313.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 13.91
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.456
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" C 1.10 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 31.80 0.20 1.00 81
NATURAL FAIR COVER
"GRASS" D 0.20 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 17.60 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 7.30 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 58.00 SUBAREA RUNOFF(CFS) = 169.93
EFFECTIVE AREA(ACRES) = 250.60 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 250.60 PEAK FLOW RATE(CFS) = 729.00

FLOW PROCESS FROM NODE 1313.00 TO NODE 1314.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 440.00 DOWNSTREAM(FEET) = 400.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1175.00 CHANNEL SLOPE = 0.0340
CHANNEL BASE(FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 6.00
CHANNEL FLOW THRU SUBAREA(CFS) = 729.00
FLOW VELOCITY(FEET/SEC.) = 13.37 FLOW DEPTH(FEET) = 4.97
TRAVEL TIME(MIN.) = 1.47 Tc(MIN.) = 15.38
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1314.00 = 5009.00 FEET.

FLOW PROCESS FROM NODE 1313.00 TO NODE 1314.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 15.38
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.258
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 0.40 0.30 1.00 63
NATURAL FAIR COVER
"GRASS" B 6.50 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 1.30 0.30 1.00 66
NATURAL FAIR COVER
"WOODLAND" B 1.10 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 8.30 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 2.80 0.25 1.00 77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 20.40 SUBAREA RUNOFF(CFS) = 54.80
EFFECTIVE AREA(ACRES) = 271.00 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 271.00 PEAK FLOW RATE(CFS) = 738.95

FLOW PROCESS FROM NODE 1313.00 TO NODE 1314.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 15.38
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.258
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" C 2.50 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 4.80 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 7.90 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 15.20 SUBAREA RUNOFF(CFS) = 41.71
EFFECTIVE AREA(ACRES) = 286.20 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 286.20 PEAK FLOW RATE(CFS) = 780.66

FLOW PROCESS FROM NODE 1314.00 TO NODE 1315.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 400.00 DOWNSTREAM(FEET) = 370.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1086.00 CHANNEL SLOPE = 0.0276
CHANNEL BASE(FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 6.00
CHANNEL FLOW THRU SUBAREA(CFS) = 780.66
FLOW VELOCITY(FEET/SEC.) = 12.58 FLOW DEPTH(FEET) = 5.43
TRAVEL TIME(MIN.) = 1.44 Tc(MIN.) = 16.82
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1315.00 = 6095.00 FEET.


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FLOW PROCESS FROM NODE 1314.00 TO NODE 1315.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 16.82
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.096
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA   Fp     Ap     SCS
LAND USE                GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"  B         4.80   0.30   1.00   63
NATURAL FAIR COVER
"GRASS"                B         10.30  0.30   1.00   69
NATURAL FAIR COVER
"OPEN BRUSH"          B         3.10   0.30   1.00   66
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND"    B         0.40   0.30   1.00   69
NATURAL FAIR COVER
"WOODLAND"           B         1.10   0.30   1.00   60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C        14.90  0.25   1.00   75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.28
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 34.60 SUBAREA RUNOFF(CFS) = 87.75
EFFECTIVE AREA (ACRES) = 320.80 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 320.80 PEAK FLOW RATE (CFS) = 826.90

*****
FLOW PROCESS FROM NODE 1314.00 TO NODE 1315.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 16.82
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.096
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA   Fp     Ap     SCS
LAND USE                GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"                C         0.40   0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"          C         6.40   0.25   1.00   77
NATURAL FAIR COVER
"WOODLAND"           C         4.20   0.25   1.00   73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D        27.90  0.20   1.00   81
NATURAL FAIR COVER
"GRASS"                D         1.10   0.20   1.00   84
NATURAL FAIR COVER
"OPEN BRUSH"          D         8.40   0.20   1.00   83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 48.40 SUBAREA RUNOFF(CFS) = 125.67
EFFECTIVE AREA (ACRES) = 369.20 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 369.20 PEAK FLOW RATE (CFS) = 952.58

*****
FLOW PROCESS FROM NODE 1315.00 TO NODE 1316.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM( FEET) = 370.00 DOWNSTREAM( FEET) = 332.00
CHANNEL LENGTH THRU SUBAREA( FEET) = 1839.00 CHANNEL SLOPE = 0.0207
CHANNEL BASE( FEET) = 7.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH( FEET) = 7.00
CHANNEL FLOW THRU SUBAREA( CFS) = 952.58
FLOW VELOCITY( FEET/SEC.) = 11.85 FLOW DEPTH( FEET) = 6.12
TRAVEL TIME( MIN.) = 2.59 Tc( MIN.) = 19.40
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1316.00 = 7934.00 FEET.

*****
FLOW PROCESS FROM NODE 1315.00 TO NODE 1316.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 19.40
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.852
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA   Fp     Ap     SCS
LAND USE                GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE"  A         0.90   0.40   0.50   32
COMMERCIAL             A         0.10   0.40   0.10   32
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND"    A         8.90   0.40   1.00   49
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B         1.50   0.30   1.00   63
NATURAL FAIR COVER
"GRASS"                B         5.20   0.30   1.00   69
NATURAL FAIR COVER
"OPEN BRUSH"          B         7.40   0.30   1.00   66
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.34
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
SUBAREA AREA (ACRES) = 24.00 SUBAREA RUNOFF(CFS) = 54.44
EFFECTIVE AREA (ACRES) = 393.20 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 393.20 PEAK FLOW RATE (CFS) = 952.58
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1315.00 TO NODE 1316.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 19.40
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.852
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA   Fp     Ap     SCS
LAND USE                GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND"    B        13.60  0.30   1.00   69
NATURAL FAIR COVER
"WOODLAND"           B         1.10   0.30   1.00   60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C        14.00  0.25   1.00   75
NATURAL FAIR COVER
"GRASS"                C         0.50   0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"          C        30.00  0.25   1.00   77
NATURAL FAIR COVER
"WOODLAND"           C         4.10   0.25   1.00   73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 63.30 SUBAREA RUNOFF(CFS) = 147.60
EFFECTIVE AREA (ACRES) = 456.50 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 456.50 PEAK FLOW RATE (CFS) = 1073.57

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FLOW PROCESS FROM NODE 1315.00 TO NODE 1316.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 19.40
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.852
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA   Fp     Ap     SCS
LAND USE                GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND"    D         1.40   0.20   1.00   84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.40 SUBAREA RUNOFF(CFS) = 3.34
EFFECTIVE AREA (ACRES) = 457.90 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 457.90 PEAK FLOW RATE (CFS) = 1076.91

*****
FLOW PROCESS FROM NODE 1316.00 TO NODE 1317.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM( FEET) = 332.00 DOWNSTREAM( FEET) = 324.00

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CHANNEL LENGTH THRU SUBAREA (FEET) = 1155.00 CHANNEL SLOPE = 0.0069
 CHANNEL BASE (FEET) = 9.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 9.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 1076.91
 FLOW VELOCITY (FEET/SEC.) = 8.11 FLOW DEPTH (FEET) = 7.87
 TRAVEL TIME (MIN.) = 2.37 Tc (MIN.) = 21.78
 LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1317.00 = 9089.00 FEET.

 FLOW PROCESS FROM NODE 1316.00 TO NODE 1317.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 21.78
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.665
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS" A 0.20 0.40 1.00 50
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" A 6.10 0.40 1.00 49
 NATURAL FAIR COVER
 "WOODLAND" A 1.20 0.40 1.00 36
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" B 0.20 0.30 1.00 63
 NATURAL FAIR COVER
 "GRASS" B 3.40 0.30 1.00 69
 NATURAL FAIR COVER
 "OPEN BRUSH" B 3.60 0.30 1.00 66
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.35
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 14.70 SUBAREA RUNOFF (CFS) = 30.61
 EFFECTIVE AREA (ACRES) = 472.60 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 472.60 PEAK FLOW RATE (CFS) = 1076.91
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 1316.00 TO NODE 1317.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 21.78
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.665
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" B 4.80 0.30 1.00 69
 NATURAL FAIR COVER
 "WOODLAND" B 0.20 0.30 1.00 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C 36.40 0.25 1.00 75
 NATURAL FAIR COVER
 "GRASS" C 5.70 0.25 1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH" C 31.30 0.25 1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C 1.30 0.25 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 79.70 SUBAREA RUNOFF (CFS) = 173.00
 EFFECTIVE AREA (ACRES) = 552.30 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 552.30 PEAK FLOW RATE (CFS) = 1203.23

 FLOW PROCESS FROM NODE 1316.00 TO NODE 1317.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 21.78
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.665
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND" C 5.40 0.25 1.00 73

NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" D 1.00 0.20 1.00 81
 NATURAL FAIR COVER
 "GRASS" D 2.50 0.20 1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH" D 1.50 0.20 1.00 83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 0.50 0.20 1.00 84
 NATURAL FAIR COVER
 "WOODLAND" D 2.40 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 13.30 SUBAREA RUNOFF (CFS) = 29.26
 EFFECTIVE AREA (ACRES) = 565.60 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 565.60 PEAK FLOW RATE (CFS) = 1232.49

 FLOW PROCESS FROM NODE 1317.00 TO NODE 1318.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

 ELEVATION DATA: UPSTREAM (FEET) = 324.00 DOWNSTREAM (FEET) = 275.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1680.00 CHANNEL SLOPE = 0.0292
 CHANNEL BASE (FEET) = 9.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 9.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 1232.49
 FLOW VELOCITY (FEET/SEC.) = 14.30 FLOW DEPTH (FEET) = 5.82
 TRAVEL TIME (MIN.) = 1.96 Tc (MIN.) = 23.74
 LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1318.00 = 10769.00 FEET.

 FLOW PROCESS FROM NODE 1317.00 TO NODE 1318.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 23.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" A 0.20 0.40 1.00 40
 COMMERCIAL A 0.20 0.40 0.10 32
 NATURAL FAIR COVER
 "WOODLAND" A 0.90 0.40 1.00 36
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" B 0.40 0.30 1.00 63
 NATURAL FAIR COVER
 "GRASS" B 4.90 0.30 1.00 69
 NATURAL FAIR COVER
 "OPEN BRUSH" B 8.20 0.30 1.00 66
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.31
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA (ACRES) = 14.80 SUBAREA RUNOFF (CFS) = 29.73
 EFFECTIVE AREA (ACRES) = 580.40 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 580.40 PEAK FLOW RATE (CFS) = 1232.49
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 1317.00 TO NODE 1318.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 23.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 COMMERCIAL B 1.20 0.30 0.10 56
 NATURAL FAIR COVER
 "WOODLAND" B 2.90 0.30 1.00 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C 59.80 0.25 1.00 75
 NATURAL FAIR COVER
 "GRASS" C 25.90 0.25 1.00 79

NATURAL FAIR COVER
 "OPEN BRUSH" C 49.90 0.25 1.00 77
 COMMERCIAL C 0.40 0.25 0.10 69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA (ACRES) = 140.10 SUBAREA RUNOFF (CFS) = 288.42
 EFFECTIVE AREA (ACRES) = 720.50 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 720.50 PEAK FLOW RATE (CFS) = 1484.95

 FLOW PROCESS FROM NODE 1317.00 TO NODE 1318.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 23.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND" C 26.80 0.25 1.00 73
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" D 16.80 0.20 1.00 81
 NATURAL FAIR COVER
 "GRASS" D 25.80 0.20 1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH" D 66.60 0.20 1.00 83
 COMMERCIAL D 2.60 0.20 0.10 75
 PUBLIC PARK D 2.30 0.20 0.85 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA (ACRES) = 140.90 SUBAREA RUNOFF (CFS) = 295.49
 EFFECTIVE AREA (ACRES) = 861.40 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 861.40 PEAK FLOW RATE (CFS) = 1780.45

 FLOW PROCESS FROM NODE 1317.00 TO NODE 1318.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 23.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 0.30 0.20 1.00 84
 NATURAL FAIR COVER
 "WOODLAND" D 14.80 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 15.10 SUBAREA RUNOFF (CFS) = 31.74
 EFFECTIVE AREA (ACRES) = 876.50 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 876.50 PEAK FLOW RATE (CFS) = 1812.19

 FLOW PROCESS FROM NODE 1318.00 TO NODE 1318.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 23.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" A 0.80 0.40 0.50 32
 NATURAL FAIR COVER
 "GRASS" A 1.10 0.40 1.00 50
 AGRICULTURAL FAIR COVER
 "ORCHARDS" A 0.90 0.40 1.00 44
 URBAN FAIR COVER
 "TURF" A 18.90 0.40 1.00 44
 NATURAL FAIR COVER
 "OPEN BRUSH" A 0.50 0.40 1.00 46
 COMMERCIAL A 1.10 0.40 0.10 32

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
 SUBAREA AREA (ACRES) = 23.30 SUBAREA RUNOFF (CFS) = 45.29
 EFFECTIVE AREA (ACRES) = 899.80 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 899.80 PEAK FLOW RATE (CFS) = 1857.48

 FLOW PROCESS FROM NODE 1318.00 TO NODE 1318.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 23.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" A 0.30 0.40 1.00 49
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" A 0.40 0.40 1.00 40
 NATURAL FAIR COVER
 "WOODLAND" A 6.20 0.40 1.00 36
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" B 12.50 0.30 1.00 63
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" B 0.50 0.30 0.50 56
 NATURAL FAIR COVER
 "GRASS" B 31.00 0.30 1.00 69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.31
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 50.90 SUBAREA RUNOFF (CFS) = 101.87
 EFFECTIVE AREA (ACRES) = 950.70 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 950.70 PEAK FLOW RATE (CFS) = 1959.35

 FLOW PROCESS FROM NODE 1318.00 TO NODE 1318.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 23.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "ORCHARDS" B 2.30 0.30 1.00 65
 URBAN FAIR COVER
 "TURF" B 18.50 0.30 1.00 65
 NATURAL FAIR COVER
 "OPEN BRUSH" B 4.00 0.30 1.00 66
 COMMERCIAL B 4.40 0.30 0.10 56
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" B 0.30 0.30 1.00 69
 NATURAL FAIR COVER
 "WOODLAND" B 6.10 0.30 1.00 60
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA (ACRES) = 35.60 SUBAREA RUNOFF (CFS) = 72.71
 EFFECTIVE AREA (ACRES) = 986.30 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 986.30 PEAK FLOW RATE (CFS) = 2032.06

 FLOW PROCESS FROM NODE 1318.00 TO NODE 1318.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 23.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C 41.20 0.25 1.00 75
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" C 0.40 0.25 0.50 69
 NATURAL FAIR COVER

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"GRASS" C 39.20 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 46.40 0.25 1.00 77
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" C 7.30 0.25 1.00 79
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" C 4.00 0.25 1.00 81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 138.50 SUBAREA RUNOFF (CFS) = 284.98
EFFECTIVE AREA (ACRES) = 1124.80 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99
TOTAL AREA (ACRES) = 1124.80 PEAK FLOW RATE (CFS) = 2317.04

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FLOW PROCESS FROM NODE 1318.00 TO NODE 1318.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 23.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" C 9.80 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" D 9.70 0.20 1.00 81
RESIDENTIAL
"5-7 DWELLINGS/ACRE" D 5.20 0.20 0.50 75
NATURAL FAIR COVER
"GRASS" D 68.00 0.20 1.00 84
URBAN FAIR COVER
"TURF" D 5.60 0.20 1.00 82
NATURAL FAIR COVER
"OPEN BRUSH" D 63.10 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
SUBAREA AREA (ACRES) = 161.40 SUBAREA RUNOFF (CFS) = 339.34
EFFECTIVE AREA (ACRES) = 1286.20 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.99
TOTAL AREA (ACRES) = 1286.20 PEAK FLOW RATE (CFS) = 2656.38

*****
FLOW PROCESS FROM NODE 1318.00 TO NODE 1318.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 23.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
COMMERCIAL D 1.80 0.20 0.10 75
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" D 14.90 0.20 1.00 84
PUBLIC PARK D 5.60 0.20 0.85 75
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" D 1.50 0.20 1.00 86
NATURAL FAIR COVER
"WOODLAND" D 24.40 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.95
SUBAREA AREA (ACRES) = 48.20 SUBAREA RUNOFF (CFS) = 101.77
EFFECTIVE AREA (ACRES) = 1334.40 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.99
TOTAL AREA (ACRES) = 1334.40 PEAK FLOW RATE (CFS) = 2758.15

*****
FLOW PROCESS FROM NODE 1318.00 TO NODE 1319.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 275.00 DOWNSTREAM (FEET) = 260.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 2012.00 CHANNEL SLOPE = 0.0075
CHANNEL BASE (FEET) = 60.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.025 MAXIMUM DEPTH (FEET) = 15.00
CHANNEL FLOW THRU SUBAREA (CFS) = 2758.15

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FLOW VELOCITY (FEET/SEC.) = 11.20 FLOW DEPTH (FEET) = 3.66
TRAVEL TIME (MIN.) = 2.99 Tc (MIN.) = 26.73
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1319.00 = 12781.00 FEET.

*****
FLOW PROCESS FROM NODE 1318.00 TO NODE 1319.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 26.73
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.370
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" A 8.60 0.40 0.50 32
NATURAL FAIR COVER
"BARREN" A 0.10 0.40 1.00 78
NATURAL FAIR COVER
"GRASS" A 8.50 0.40 1.00 50
NATURAL FAIR COVER
"OPEN BRUSH" A 0.20 0.40 1.00 46
COMMERCIAL A 0.90 0.40 0.10 32
NATURAL FAIR COVER
"WOODLAND" A 4.00 0.40 1.00 36
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.40
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.77
SUBAREA AREA (ACRES) = 22.30 SUBAREA RUNOFF (CFS) = 41.38
EFFECTIVE AREA (ACRES) = 1356.70 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
TOTAL AREA (ACRES) = 1356.70 PEAK FLOW RATE (CFS) = 2758.15
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1318.00 TO NODE 1319.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 26.73
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.370
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" B 3.90 0.30 0.50 56
NATURAL FAIR COVER
"GRASS" B 10.90 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 2.50 0.30 1.00 66
COMMERCIAL B 0.30 0.30 0.10 56
NATURAL FAIR COVER
"WOODLAND" B 0.20 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C 11.60 0.25 1.00 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.28
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.92
SUBAREA AREA (ACRES) = 29.40 SUBAREA RUNOFF (CFS) = 55.90
EFFECTIVE AREA (ACRES) = 1386.10 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
TOTAL AREA (ACRES) = 1386.10 PEAK FLOW RATE (CFS) = 2758.15
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1318.00 TO NODE 1319.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 26.73
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.370
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 3.90 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 5.90 0.25 1.00 77
COMMERCIAL C 1.60 0.25 0.10 69
NATURAL FAIR COVER

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"WOODLAND" C 10.10 0.25 1.00 73
RESIDENTIAL
"5-7 DWELLINGS/ACRE" D 9.90 0.20 0.50 75
NATURAL POOR COVER
"BARREN" D 4.20 0.20 1.00 93
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.82
SUBAREA AREA (ACRES) = 35.60 SUBAREA RUNOFF (CFS) = 69.78
EFFECTIVE AREA (ACRES) = 1421.70 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
TOTAL AREA (ACRES) = 1421.70 PEAK FLOW RATE (CFS) = 2758.15
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1318.00 TO NODE 1319.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 26.73
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.370
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" D 0.80 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 23.00 0.20 1.00 83
PUBLIC PARK D 2.10 0.20 0.85 75
NATURAL GOOD COVER
"MEADOWS" D 5.10 0.20 1.00 78
NATURAL FAIR COVER
"WOODLAND" D 5.20 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA (ACRES) = 36.20 SUBAREA RUNOFF (CFS) = 70.76
EFFECTIVE AREA (ACRES) = 1457.90 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
TOTAL AREA (ACRES) = 1457.90 PEAK FLOW RATE (CFS) = 2796.89

*****
FLOW PROCESS FROM NODE 1319.00 TO NODE 1336.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 260.00 DOWNSTREAM (FEET) = 255.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1882.00 CHANNEL SLOPE = 0.0027
CHANNEL BASE (FEET) = 60.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.025 MAXIMUM DEPTH (FEET) = 15.00
CHANNEL FLOW THRU SUBAREA (CFS) = 2796.89
FLOW VELOCITY (FEET/SEC.) = 8.02 FLOW DEPTH (FEET) = 4.98
TRAVEL TIME (MIN.) = 3.91 Tc (MIN.) = 30.64
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1336.00 = 14663.00 FEET.

*****
FLOW PROCESS FROM NODE 1319.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 30.64
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.196
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 0.20 0.30 1.00 63
NATURAL FAIR COVER
"GRASS" B 3.00 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 7.60 0.30 1.00 66
COMMERCIAL B 1.50 0.30 0.10 56
NATURAL FAIR COVER
"WOODLAND" B 5.70 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 23.80 0.25 1.00 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.97
SUBAREA AREA (ACRES) = 41.80 SUBAREA RUNOFF (CFS) = 72.75
EFFECTIVE AREA (ACRES) = 1499.70 AREA-AVERAGED Fm (INCH/HR) = 0.24

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AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
TOTAL AREA (ACRES) = 1499.70 PEAK FLOW RATE (CFS) = 2796.89
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1319.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 30.64
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.196
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.90 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 12.90 0.25 1.00 77
COMMERCIAL C 1.70 0.25 0.10 69
NATURAL FAIR COVER
"WOODLAND" C 10.70 0.25 1.00 73
NATURAL POOR COVER
"BARREN" D 1.30 0.20 1.00 93
NATURAL FAIR COVER
"OPEN BRUSH" D 16.90 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.97
SUBAREA AREA (ACRES) = 44.40 SUBAREA RUNOFF (CFS) = 78.91
EFFECTIVE AREA (ACRES) = 1544.10 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
TOTAL AREA (ACRES) = 1544.10 PEAK FLOW RATE (CFS) = 2796.89
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1319.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 30.64
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.196
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL GOOD COVER
"MEADOWS" D 0.60 0.20 1.00 78
NATURAL FAIR COVER
"WOODLAND" D 6.50 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 7.10 SUBAREA RUNOFF (CFS) = 12.75
EFFECTIVE AREA (ACRES) = 1551.20 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
TOTAL AREA (ACRES) = 1551.20 PEAK FLOW RATE (CFS) = 2796.89
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1336.00 TO NODE 1336.00 IS CODE = 1
-----
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
-----
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
TIME OF CONCENTRATION (MIN.) = 30.64
RAINFALL INTENSITY (INCH/HR) = 2.20
AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24
AREA-AVERAGED Ap = 0.98
EFFECTIVE STREAM AREA (ACRES) = 1551.20
TOTAL STREAM AREA (ACRES) = 1551.20
PEAK FLOW RATE (CFS) AT CONFLUENCE = 2796.89

*****
FLOW PROCESS FROM NODE 1320.00 TO NODE 1321.00 IS CODE = 21
-----
>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
-----
INITIAL SUBAREA FLOW-LENGTH (FEET) = 320.00
ELEVATION DATA: UPSTREAM (FEET) = 868.00 DOWNSTREAM (FEET) = 775.00

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Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.082
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.432
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS      Tc
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN (MIN.)
NATURAL FAIR COVER
"OPEN BRUSH"           C      0.80     0.25     1.00    77     9.08
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C      0.10     0.25     1.00    81     9.08
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA RUNOFF(CFS) = 3.39
TOTAL AREA(ACRES) = 0.90 PEAK FLOW RATE(CFS) = 3.39

*****
FLOW PROCESS FROM NODE 1321.00 TO NODE 1322.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 775.00 DOWNSTREAM(FEET) = 750.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 141.00 CHANNEL SLOPE = 0.1773
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 3.39
FLOW VELOCITY(FEET/SEC.) = 6.33 FLOW DEPTH(FEET) = 0.39
TRAVEL TIME(MIN.) = 0.37 Tc(MIN.) = 9.45
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1322.00 = 461.00 FEET.

*****
FLOW PROCESS FROM NODE 1321.00 TO NODE 1322.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 9.45
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.322
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"           C      0.40     0.25     1.00    77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C      0.70     0.25     1.00    81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 4.03
EFFECTIVE AREA(ACRES) = 2.00 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 2.00 PEAK FLOW RATE(CFS) = 7.33

*****
FLOW PROCESS FROM NODE 1322.00 TO NODE 1323.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 750.00 DOWNSTREAM(FEET) = 700.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 365.00 CHANNEL SLOPE = 0.1370
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 7.33
FLOW VELOCITY(FEET/SEC.) = 7.13 FLOW DEPTH(FEET) = 0.63
TRAVEL TIME(MIN.) = 0.85 Tc(MIN.) = 10.31
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1323.00 = 826.00 FEET.

*****
FLOW PROCESS FROM NODE 1322.00 TO NODE 1323.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 10.31
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.099
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C      0.80     0.25     1.00    81

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NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D      0.80     0.20     1.00    86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 1.60 SUBAREA RUNOFF(CFS) = 5.58
EFFECTIVE AREA(ACRES) = 3.60 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 3.60 PEAK FLOW RATE(CFS) = 12.51

*****
FLOW PROCESS FROM NODE 1323.00 TO NODE 1324.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 700.00 DOWNSTREAM(FEET) = 680.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 265.00 CHANNEL SLOPE = 0.0755
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 12.51
FLOW VELOCITY(FEET/SEC.) = 6.53 FLOW DEPTH(FEET) = 0.97
TRAVEL TIME(MIN.) = 0.68 Tc(MIN.) = 10.98
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1324.00 = 1091.00 FEET.

*****
FLOW PROCESS FROM NODE 1323.00 TO NODE 1324.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 10.98
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.963
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C      1.10     0.25     1.00    81
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D      1.30     0.20     1.00    86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 2.40 SUBAREA RUNOFF(CFS) = 8.08
EFFECTIVE AREA(ACRES) = 6.00 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 6.00 PEAK FLOW RATE(CFS) = 20.15

*****
FLOW PROCESS FROM NODE 1324.00 TO NODE 1325.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 680.00 DOWNSTREAM(FEET) = 670.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 111.00 CHANNEL SLOPE = 0.0901
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 20.15
FLOW VELOCITY(FEET/SEC.) = 7.68 FLOW DEPTH(FEET) = 0.90
TRAVEL TIME(MIN.) = 0.24 Tc(MIN.) = 11.22
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1325.00 = 1202.00 FEET.

*****
FLOW PROCESS FROM NODE 1324.00 TO NODE 1325.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 11.22
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.915
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C      0.90     0.25     1.00    81
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D      1.10     0.20     1.00    86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 2.00 SUBAREA RUNOFF(CFS) = 6.65
EFFECTIVE AREA(ACRES) = 8.00 AREA-AVERAGED Fm(INCH/HR) = 0.23

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AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 8.00 PEAK FLOW RATE(CFS) = 26.53

FLOW PROCESS FROM NODE 1325.00 TO NODE 1326.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 670.00 DOWNSTREAM(FEET) = 665.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 82.00 CHANNEL SLOPE = 0.0610
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 26.53
FLOW VELOCITY(FEET/SEC.) = 7.20 FLOW DEPTH(FEET) = 1.16
TRAVEL TIME(MIN.) = 0.19 Tc(MIN.) = 11.41
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1326.00 = 1284.00 FEET.

FLOW PROCESS FROM NODE 1325.00 TO NODE 1326.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 11.41
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.877
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 0.60 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C 4.70 0.25 1.00 81
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D 2.90 0.20 1.00 86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 8.20 SUBAREA RUNOFF(CFS) = 26.90
EFFECTIVE AREA(ACRES) = 16.20 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 16.20 PEAK FLOW RATE(CFS) = 53.16

FLOW PROCESS FROM NODE 1326.00 TO NODE 1327.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 665.00 DOWNSTREAM(FEET) = 625.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 826.00 CHANNEL SLOPE = 0.0484
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 53.16
FLOW VELOCITY(FEET/SEC.) = 7.93 FLOW DEPTH(FEET) = 1.77
TRAVEL TIME(MIN.) = 1.73 Tc(MIN.) = 13.15
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1327.00 = 2110.00 FEET.

FLOW PROCESS FROM NODE 1326.00 TO NODE 1327.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 13.15
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.567
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 1.10 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 2.00 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C 2.10 0.25 1.00 81
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.70 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 1.30 0.20 1.00 83
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D 4.10 0.20 1.00 86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 11.30 SUBAREA RUNOFF(CFS) = 34.00
EFFECTIVE AREA(ACRES) = 27.50 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 27.50 PEAK FLOW RATE(CFS) = 82.63

FLOW PROCESS FROM NODE 1326.00 TO NODE 1327.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 13.15
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.567
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" D 0.90 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 0.90 SUBAREA RUNOFF(CFS) = 2.73
EFFECTIVE AREA(ACRES) = 28.40 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 28.40 PEAK FLOW RATE(CFS) = 85.36

FLOW PROCESS FROM NODE 1327.00 TO NODE 1328.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 625.00 DOWNSTREAM(FEET) = 595.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 794.00 CHANNEL SLOPE = 0.0378
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 85.36
FLOW VELOCITY(FEET/SEC.) = 8.09 FLOW DEPTH(FEET) = 2.08
TRAVEL TIME(MIN.) = 1.64 Tc(MIN.) = 14.79
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1328.00 = 2904.00 FEET.

FLOW PROCESS FROM NODE 1327.00 TO NODE 1328.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 14.79
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.331
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 1.30 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 3.60 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C 5.40 0.25 1.00 81
NATURAL FAIR COVER
"WOODLAND" C 0.20 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 1.30 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 1.00 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 12.80 SUBAREA RUNOFF(CFS) = 35.60
EFFECTIVE AREA(ACRES) = 41.20 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 41.20 PEAK FLOW RATE(CFS) = 114.93

FLOW PROCESS FROM NODE 1327.00 TO NODE 1328.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 14.79
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.331
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN

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NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D 6.30 0.20 1.00 86
NATURAL FAIR COVER
"WOODLAND" D 1.40 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 7.70 SUBAREA RUNOFF (CFS) = 21.70
EFFECTIVE AREA (ACRES) = 48.90 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 48.90 PEAK FLOW RATE (CFS) = 136.63

*****
FLOW PROCESS FROM NODE 1328.00 TO NODE 1329.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 595.00 DOWNSTREAM (FEET) = 553.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 746.00 CHANNEL SLOPE = 0.0563
CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
CHANNEL FLOW THRU SUBAREA (CFS) = 136.63
FLOW VELOCITY (FEET/SEC.) = 10.60 FLOW DEPTH (FEET) = 2.39
TRAVEL TIME (MIN.) = 1.17 Tc (MIN.) = 15.96
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1329.00 = 3650.00 FEET.

*****
FLOW PROCESS FROM NODE 1328.00 TO NODE 1329.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 15.96
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.193
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.10 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.90 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C 4.40 0.25 1.00 81
NATURAL FAIR COVER
"WOODLAND" C 0.20 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D 7.10 0.20 1.00 86
NATURAL FAIR COVER
"WOODLAND" D 0.10 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 12.80 SUBAREA RUNOFF (CFS) = 34.22
EFFECTIVE AREA (ACRES) = 61.70 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 61.70 PEAK FLOW RATE (CFS) = 164.77

*****
FLOW PROCESS FROM NODE 1329.00 TO NODE 1330.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 553.00 DOWNSTREAM (FEET) = 550.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 81.00 CHANNEL SLOPE = 0.0370
CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
CHANNEL FLOW THRU SUBAREA (CFS) = 164.77
FLOW VELOCITY (FEET/SEC.) = 9.51 FLOW DEPTH (FEET) = 2.92
TRAVEL TIME (MIN.) = 0.14 Tc (MIN.) = 16.10
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1330.00 = 3731.00 FEET.

*****
FLOW PROCESS FROM NODE 1329.00 TO NODE 1330.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 16.10
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.177
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D 11.30 0.20 1.00 86
NATURAL FAIR COVER
"WOODLAND" D 4.60 0.20 1.00 79

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LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 7.10 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 15.70 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C 4.60 0.25 1.00 81
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.70 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 2.70 0.20 1.00 83
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D 7.80 0.20 1.00 86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 38.60 SUBAREA RUNOFF (CFS) = 102.18
EFFECTIVE AREA (ACRES) = 100.30 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 100.30 PEAK FLOW RATE (CFS) = 266.07

*****
FLOW PROCESS FROM NODE 1330.00 TO NODE 1331.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 550.00 DOWNSTREAM (FEET) = 510.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1259.00 CHANNEL SLOPE = 0.0318
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 266.07
FLOW VELOCITY (FEET/SEC.) = 10.12 FLOW DEPTH (FEET) = 3.50
TRAVEL TIME (MIN.) = 2.07 Tc (MIN.) = 18.17
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1331.00 = 4990.00 FEET.

*****
FLOW PROCESS FROM NODE 1330.00 TO NODE 1331.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 18.17
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.961
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 1.00 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 8.80 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C 8.60 0.25 1.00 81
NATURAL FAIR COVER
"WOODLAND" C 1.30 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 1.60 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 4.70 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 26.00 SUBAREA RUNOFF (CFS) = 63.71
EFFECTIVE AREA (ACRES) = 126.30 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 126.30 PEAK FLOW RATE (CFS) = 310.27

*****
FLOW PROCESS FROM NODE 1330.00 TO NODE 1331.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 18.17
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.961
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D 11.30 0.20 1.00 86
NATURAL FAIR COVER
"WOODLAND" D 4.60 0.20 1.00 79

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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 15.90 SUBAREA RUNOFF (CFS) = 39.51
EFFECTIVE AREA (ACRES) = 142.20 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 142.20 PEAK FLOW RATE (CFS) = 349.78

FLOW PROCESS FROM NODE 1331.00 TO NODE 1332.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 510.00 DOWNSTREAM (FEET) = 473.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1191.00 CHANNEL SLOPE = 0.0311
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 349.78
FLOW VELOCITY (FEET/SEC.) = 10.73 FLOW DEPTH (FEET) = 3.73
TRAVEL TIME (MIN.) = 1.85 Tc (MIN.) = 20.02
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1332.00 = 6181.00 FEET.

FLOW PROCESS FROM NODE 1331.00 TO NODE 1332.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 20.02
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.798
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C 15.30 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 0.60 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 41.80 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" C 10.00 0.25 1.00 81
NATURAL FAIR COVER
"WOODLAND" C 0.50 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" D 3.70 0.20 1.00 81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 71.90 SUBAREA RUNOFF (CFS) = 165.05
EFFECTIVE AREA (ACRES) = 214.10 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 214.10 PEAK FLOW RATE (CFS) = 494.03

FLOW PROCESS FROM NODE 1331.00 TO NODE 1332.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 20.02
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.798
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" D 10.30 0.20 1.00 83
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" D 17.30 0.20 1.00 86
NATURAL FAIR COVER
"WOODLAND" D 2.50 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 30.10 SUBAREA RUNOFF (CFS) = 70.38
EFFECTIVE AREA (ACRES) = 244.20 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 244.20 PEAK FLOW RATE (CFS) = 564.41

FLOW PROCESS FROM NODE 1332.00 TO NODE 1333.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 473.00 DOWNSTREAM (FEET) = 395.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 2125.00 CHANNEL SLOPE = 0.0367
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 564.41
FLOW VELOCITY (FEET/SEC.) = 12.89 FLOW DEPTH (FEET) = 4.57
TRAVEL TIME (MIN.) = 2.75 Tc (MIN.) = 22.77
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1333.00 = 8306.00 FEET.

FLOW PROCESS FROM NODE 1332.00 TO NODE 1333.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 22.77
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.594
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C 2.90 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 17.50 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 22.50 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" C 15.40 0.25 1.00 81
NATURAL FAIR COVER
"WOODLAND" C 1.40 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" D 6.80 0.20 1.00 81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 66.50 SUBAREA RUNOFF (CFS) = 140.58
EFFECTIVE AREA (ACRES) = 310.70 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 310.70 PEAK FLOW RATE (CFS) = 660.06

FLOW PROCESS FROM NODE 1332.00 TO NODE 1333.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 22.77
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.594
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" D 3.50 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 4.10 0.20 1.00 83
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" D 10.00 0.20 1.00 86
NATURAL FAIR COVER
"WOODLAND" D 4.00 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 21.60 SUBAREA RUNOFF (CFS) = 46.53
EFFECTIVE AREA (ACRES) = 332.30 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 332.30 PEAK FLOW RATE (CFS) = 706.59

FLOW PROCESS FROM NODE 1333.00 TO NODE 1334.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 395.00 DOWNSTREAM (FEET) = 350.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1657.00 CHANNEL SLOPE = 0.0272
CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
CHANNEL FLOW THRU SUBAREA (CFS) = 706.59
FLOW VELOCITY (FEET/SEC.) = 12.18 FLOW DEPTH (FEET) = 5.19
TRAVEL TIME (MIN.) = 2.27 Tc (MIN.) = 25.04
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1334.00 = 9963.00 FEET.

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FLOW PROCESS FROM NODE 1333.00 TO NODE 1334.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 25.04
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.458
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" A       1.50   0.40   1.00   40
NATURAL FAIR COVER
"GRASS"              A       0.70   0.40   1.00   50
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C       5.70   0.25   1.00   75
NATURAL FAIR COVER
"GRASS"              C      12.90   0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"        C       2.20   0.25   1.00   77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C       1.50   0.25   1.00   81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 24.50 SUBAREA RUNOFF (CFS) = 48.39
EFFECTIVE AREA (ACRES) = 356.80 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 356.80 PEAK FLOW RATE (CFS) = 714.40

*****
FLOW PROCESS FROM NODE 1333.00 TO NODE 1334.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 25.04
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.458
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND"          C       4.40   0.25   1.00   73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D       2.00   0.20   1.00   81
NATURAL FAIR COVER
"GRASS"              D      12.50   0.20   1.00   84
NATURAL FAIR COVER
"OPEN BRUSH"        D       1.10   0.20   1.00   83
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D       0.50   0.20   1.00   86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 20.50 SUBAREA RUNOFF (CFS) = 41.46
EFFECTIVE AREA (ACRES) = 377.30 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 377.30 PEAK FLOW RATE (CFS) = 755.86

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FLOW PROCESS FROM NODE 1334.00 TO NODE 1335.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 350.00 DOWNSTREAM (FEET) = 325.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1739.00 CHANNEL SLOPE = 0.0144
CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00
CHANNEL FLOW THRU SUBAREA (CFS) = 755.86
FLOW VELOCITY (FEET/SEC.) = 9.76 FLOW DEPTH (FEET) = 5.97
TRAVEL TIME (MIN.) = 2.97 Tc (MIN.) = 28.01
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1335.00 = 11702.00 FEET.

*****
FLOW PROCESS FROM NODE 1334.00 TO NODE 1335.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 28.01
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.308

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SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              A       1.80   0.40   1.00   50
NATURAL FAIR COVER
"OPEN BRUSH"        A       1.60   0.40   1.00   46
NATURAL FAIR COVER
"WOODLAND"          A       1.60   0.40   1.00   36
NATURAL FAIR COVER
"GRASS"              B       0.20   0.30   1.00   69
AGRICULTURAL FAIR COVER
"ORCHARDS"          B       1.00   0.30   1.00   65
NATURAL FAIR COVER
"OPEN BRUSH"        B       1.00   0.30   1.00   66
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.37
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 7.20 SUBAREA RUNOFF (CFS) = 12.56
EFFECTIVE AREA (ACRES) = 384.50 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 384.50 PEAK FLOW RATE (CFS) = 755.86
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1334.00 TO NODE 1335.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 28.01
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.308
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND"          B       0.20   0.30   1.00   60
NATURAL FAIR COVER
"GRASS"              C      15.40   0.25   1.00   79
AGRICULTURAL FAIR COVER
"ORCHARDS"          C       0.20   0.25   1.00   77
NATURAL FAIR COVER
"OPEN BRUSH"        C       6.70   0.25   1.00   77
NATURAL FAIR COVER
"WOODLAND"          C       2.10   0.25   1.00   73
NATURAL FAIR COVER
"GRASS"              D      27.40   0.20   1.00   84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 52.00 SUBAREA RUNOFF (CFS) = 97.52
EFFECTIVE AREA (ACRES) = 436.50 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 436.50 PEAK FLOW RATE (CFS) = 814.89

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FLOW PROCESS FROM NODE 1334.00 TO NODE 1335.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 28.01
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.308
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"        D       2.80   0.20   1.00   83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.80 SUBAREA RUNOFF (CFS) = 5.31
EFFECTIVE AREA (ACRES) = 439.30 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 439.30 PEAK FLOW RATE (CFS) = 820.20

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FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 325.00 DOWNSTREAM (FEET) = 255.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 2829.00 CHANNEL SLOPE = 0.0247

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CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 820.20
 FLOW VELOCITY (FEET/SEC.) = 12.19 FLOW DEPTH (FEET) = 5.42
 TRAVEL TIME (MIN.) = 3.87 Tc (MIN.) = 31.88
 LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1336.00 = 14531.00 FEET.

 FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 31.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.149
 SUBAREA LOSS RATE DATA (AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	A	2.30	0.40	1.00	40
RESIDENTIAL "5-7 DWELLINGS/ACRE"	A	8.30	0.40	0.50	32
NATURAL POOR COVER "BARREN"	A	0.80	0.40	1.00	78
NATURAL FAIR COVER "GRASS"	A	11.50	0.40	1.00	50
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	A	22.90	0.40	1.00	49
NATURAL FAIR COVER "OPEN BRUSH"	A	0.70	0.40	1.00	46
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.40					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.91					
SUBAREA AREA (ACRES) = 46.50 SUBAREA RUNOFF (CFS) = 74.67					
EFFECTIVE AREA (ACRES) = 485.80 AREA-AVERAGED Fm (INCH/HR) = 0.25					
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99					
TOTAL AREA (ACRES) = 485.80 PEAK FLOW RATE (CFS) = 832.01					

 FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 31.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.149
 SUBAREA LOSS RATE DATA (AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER "WOODLAND"	A	1.30	0.40	1.00	36
NATURAL FAIR COVER "GRASS"	B	0.70	0.30	1.00	69
AGRICULTURAL FAIR COVER "ORCHARDS"	B	16.70	0.30	1.00	65
NATURAL FAIR COVER "OPEN BRUSH"	B	0.40	0.30	1.00	66
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	C	0.90	0.25	1.00	75
RESIDENTIAL "5-7 DWELLINGS/ACRE"	C	0.20	0.25	0.50	69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.30					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 20.20 SUBAREA RUNOFF (CFS) = 33.56					
EFFECTIVE AREA (ACRES) = 506.00 AREA-AVERAGED Fm (INCH/HR) = 0.25					
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99					
TOTAL AREA (ACRES) = 506.00 PEAK FLOW RATE (CFS) = 865.58					

 FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 31.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.149
 SUBAREA LOSS RATE DATA (AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER "GRASS"	C	4.40	0.25	1.00	79
AGRICULTURAL FAIR COVER "ORCHARDS"	C	3.40	0.25	1.00	77

NATURAL FAIR COVER
 "OPEN BRUSH" C 2.70 0.25 1.00 77
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 0.90 0.20 0.50 75
 NATURAL POOR COVER
 "BARREN" D 7.90 0.20 1.00 93
 NATURAL FAIR COVER
 "GRASS" D 10.80 0.20 1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA (ACRES) = 30.10 SUBAREA RUNOFF (CFS) = 52.40
 EFFECTIVE AREA (ACRES) = 536.10 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 536.10 PEAK FLOW RATE (CFS) = 917.97

 FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 31.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.149
 SUBAREA LOSS RATE DATA (AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL FAIR COVER "ORCHARDS"	D	3.00	0.20	1.00	82
NATURAL FAIR COVER "OPEN BRUSH"	D	4.40	0.20	1.00	83
NATURAL GOOD COVER "MEADOWS"	D	4.20	0.20	1.00	78
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	D	2.20	0.20	1.00	84
NATURAL FAIR COVER "WOODLAND"	D	0.70	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 14.50 SUBAREA RUNOFF (CFS) = 25.43					
EFFECTIVE AREA (ACRES) = 550.60 AREA-AVERAGED Fm (INCH/HR) = 0.24					
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99					
TOTAL AREA (ACRES) = 550.60 PEAK FLOW RATE (CFS) = 943.40					

 FLOW PROCESS FROM NODE 1336.00 TO NODE 1336.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
 >>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
 TIME OF CONCENTRATION (MIN.) = 31.88
 RAINFALL INTENSITY (INCH/HR) = 2.15
 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.25
 AREA-AVERAGED Ap = 0.99
 EFFECTIVE STREAM AREA (ACRES) = 550.60
 TOTAL STREAM AREA (ACRES) = 550.60
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 943.40

** CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp (Fm) (INCH/HR)	Ap (ACRES)	Ae (ACRES)	HEADWATER NODE
1	2796.89	30.64	2.196	0.24 (0.24)	0.98	1551.2	1300.00
2	943.40	31.88	2.149	0.25 (0.24)	0.99	550.6	1320.00

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp (Fm) (INCH/HR)	Ap (ACRES)	Ae (ACRES)	HEADWATER NODE
1	3726.07	30.64	2.196	0.24 (0.24)	0.98	2080.4	1300.00
2	3673.08	31.88	2.149	0.24 (0.24)	0.98	2101.8	1320.00

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE (CFS) = 3726.07 Tc (MIN.) = 30.64
 EFFECTIVE AREA (ACRES) = 2080.42 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 2101.80

LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1336.00 = 14663.00 FEET.

FLOW PROCESS FROM NODE 1336.00 TO NODE 1354.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 255.00 DOWNSTREAM(FEET) = 240.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1844.00 CHANNEL SLOPE = 0.0081
CHANNEL BASE(FEET) = 60.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.025 MAXIMUM DEPTH(FEET) = 15.00
CHANNEL FLOW THRU SUBAREA(CFS) = 3726.07
FLOW VELOCITY(FEET/SEC.) = 12.79 FLOW DEPTH(FEET) = 4.25
TRAVEL TIME(MIN.) = 2.40 Tc(MIN.) = 33.04
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1354.00 = 16507.00 FEET.

FLOW PROCESS FROM NODE 1336.00 TO NODE 1354.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 33.04
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" A 3.30 0.40 0.50 32
NATURAL FAIR COVER
"GRASS" A 6.90 0.40 1.00 50
URBAN FAIR COVER
"TURF" A 0.80 0.40 1.00 44
NATURAL FAIR COVER
"OPEN BRUSH" A 0.80 0.40 1.00 46
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" A 24.30 0.40 1.00 49
NATURAL FAIR COVER
"WOODLAND" A 2.90 0.40 1.00 36
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96
SUBAREA AREA(ACRES) = 39.00 SUBAREA RUNOFF(CFS) = 60.42
EFFECTIVE AREA(ACRES) = 2119.42 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 2140.80 PEAK FLOW RATE(CFS) = 3726.07
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 1336.00 TO NODE 1354.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 33.04
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" B 5.80 0.30 1.00 63
RESIDENTIAL
"5-7 DWELLINGS/ACRE" B 3.50 0.30 0.50 56
NATURAL POOR COVER
"BARREN" B 1.90 0.30 1.00 86
NATURAL FAIR COVER
"GRASS" B 23.50 0.30 1.00 69
AGRICULTURAL FAIR COVER
"ORCHARDS" B 12.50 0.30 1.00 65
URBAN FAIR COVER
"TURF" B 0.70 0.30 1.00 65
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96
SUBAREA AREA(ACRES) = 47.90 SUBAREA RUNOFF(CFS) = 78.26
EFFECTIVE AREA(ACRES) = 2167.32 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 2188.70 PEAK FLOW RATE(CFS) = 3726.07
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 1336.00 TO NODE 1354.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 33.04
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" B 30.30 0.30 1.00 66
COMMERCIAL B 1.90 0.30 0.10 56
PUBLIC PARK B 1.30 0.30 0.85 56
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" B 0.70 0.30 1.00 69
NATURAL FAIR COVER
"WOODLAND" B 39.60 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C 70.40 0.25 1.00 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA(ACRES) = 144.20 SUBAREA RUNOFF(CFS) = 237.85
EFFECTIVE AREA(ACRES) = 2311.52 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 2332.90 PEAK FLOW RATE(CFS) = 3867.16

FLOW PROCESS FROM NODE 1336.00 TO NODE 1354.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 33.04
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" C 3.20 0.25 0.50 69
NATURAL FAIR COVER
"GRASS" C 22.10 0.25 1.00 79
AGRICULTURAL FAIR COVER
"ORCHARDS" C 2.90 0.25 1.00 77
URBAN FAIR COVER
"TURF" C 0.70 0.25 1.00 77
NATURAL FAIR COVER
"OPEN BRUSH" C 119.10 0.25 1.00 77
PUBLIC PARK C 0.80 0.25 0.85 69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA(ACRES) = 148.80 SUBAREA RUNOFF(CFS) = 248.72
EFFECTIVE AREA(ACRES) = 2460.32 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 2481.70 PEAK FLOW RATE(CFS) = 4115.89

FLOW PROCESS FROM NODE 1336.00 TO NODE 1354.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 33.04
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"WOODLAND" C 114.30 0.25 1.00 73
PUBLIC PARK D 0.10 0.20 0.85 75
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" D 1.10 0.20 1.00 81
NATURAL POOR COVER
"BARREN" D 0.10 0.20 1.00 93
NATURAL FAIR COVER
"GRASS" D 13.20 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 129.20 SUBAREA RUNOFF(CFS) = 216.28
EFFECTIVE AREA(ACRES) = 2589.52 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98

TOTAL AREA (ACRES) = 2610.90 PEAK FLOW RATE (CFS) = 4332.17

FLOW PROCESS FROM NODE 1336.00 TO NODE 1354.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 33.04
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
 SUBAREA LOSS RATE DATA (AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL FAIR COVER "ORCHARDS"	D	7.20	0.20	1.00	82
URBAN FAIR COVER "TURF"	D	3.30	0.20	1.00	82
NATURAL FAIR COVER "OPEN BRUSH"	D	6.40	0.20	1.00	83
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	D	1.60	0.20	1.00	84
NATURAL FAIR COVER "WOODLAND"	D	13.90	0.20	1.00	79

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 32.40 SUBAREA RUNOFF (CFS) = 55.53
 EFFECTIVE AREA (ACRES) = 2621.92 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 2643.30 PEAK FLOW RATE (CFS) = 4387.70

FLOW PROCESS FROM NODE 1354.00 TO NODE 1354.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 TIME OF CONCENTRATION (MIN.) = 33.04
 RAINFALL INTENSITY (INCH/HR) = 2.10
 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.25
 AREA-AVERAGED Ap = 0.98
 EFFECTIVE STREAM AREA (ACRES) = 2621.92
 TOTAL STREAM AREA (ACRES) = 2643.30
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 4387.70

FLOW PROCESS FROM NODE 1340.00 TO NODE 1341.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
 >>>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH (FEET) = 330.00
 ELEVATION DATA: UPSTREAM (FEET) = 1075.00 DOWNSTREAM (FEET) = 985.00

Tc = K * [(LENGTH** 3.00) / (ELEVATION CHANGE)] ** 0.20
 SUBAREA ANALYSIS USED MINIMUM Tc (MIN.) = 9.312
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.364
 SUBAREA Tc AND LOSS RATE DATA (AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
NATURAL FAIR COVER "GRASS"	C	0.20	0.25	1.00	79	9.31
NATURAL FAIR COVER "OPEN BRUSH"	C	0.30	0.25	1.00	77	9.31

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF (CFS) = 1.85
 TOTAL AREA (ACRES) = 0.50 PEAK FLOW RATE (CFS) = 1.85

FLOW PROCESS FROM NODE 1341.00 TO NODE 1342.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 985.00 DOWNSTREAM (FEET) = 950.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 148.00 CHANNEL SLOPE = 0.2365
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00

CHANNEL FLOW THRU SUBAREA (CFS) = 1.85
 FLOW VELOCITY (FEET/SEC.) = 5.79 FLOW DEPTH (FEET) = 0.25
 TRAVEL TIME (MIN.) = 0.43 Tc (MIN.) = 9.74
 LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1342.00 = 478.00 FEET.

FLOW PROCESS FROM NODE 1341.00 TO NODE 1342.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 9.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.238
 SUBAREA LOSS RATE DATA (AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER "GRASS"	C	0.20	0.25	1.00	79
NATURAL FAIR COVER "OPEN BRUSH"	C	0.20	0.25	1.00	77

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 0.40 SUBAREA RUNOFF (CFS) = 1.44
 EFFECTIVE AREA (ACRES) = 0.90 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 0.90 PEAK FLOW RATE (CFS) = 3.23

FLOW PROCESS FROM NODE 1342.00 TO NODE 1343.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 950.00 DOWNSTREAM (FEET) = 915.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 210.00 CHANNEL SLOPE = 0.1667
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 3.23
 FLOW VELOCITY (FEET/SEC.) = 6.07 FLOW DEPTH (FEET) = 0.38
 TRAVEL TIME (MIN.) = 0.58 Tc (MIN.) = 10.31
 LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1343.00 = 688.00 FEET.

FLOW PROCESS FROM NODE 1342.00 TO NODE 1343.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 10.31
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.097
 SUBAREA LOSS RATE DATA (AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER "GRASS"	C	1.00	0.25	1.00	79

SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 1.00 SUBAREA RUNOFF (CFS) = 3.46
 EFFECTIVE AREA (ACRES) = 1.90 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 1.90 PEAK FLOW RATE (CFS) = 6.58

FLOW PROCESS FROM NODE 1343.00 TO NODE 1344.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 915.00 DOWNSTREAM (FEET) = 884.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 310.00 CHANNEL SLOPE = 0.1000
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 6.58
 FLOW VELOCITY (FEET/SEC.) = 6.12 FLOW DEPTH (FEET) = 0.65
 TRAVEL TIME (MIN.) = 0.84 Tc (MIN.) = 11.16
 LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1344.00 = 998.00 FEET.

FLOW PROCESS FROM NODE 1343.00 TO NODE 1344.00 IS CODE = 81

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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 11.16
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.928
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                C      2.50      0.25      1.00      79
NATURAL FAIR COVER
"OPEN BRUSH"          C      0.70      0.25      1.00      77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 3.20      SUBAREA RUNOFF(CFS) = 10.59
EFFECTIVE AREA(ACRES) = 5.10      AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25      AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 5.10      PEAK FLOW RATE(CFS) = 16.88

*****
FLOW PROCESS FROM NODE 1344.00 TO NODE 1345.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 884.00 DOWNSTREAM(FEET) = 875.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 387.00 CHANNEL SLOPE = 0.0233
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 16.88
FLOW VELOCITY(FEET/SEC.) = 4.47 FLOW DEPTH(FEET) = 1.19
TRAVEL TIME(MIN.) = 1.44 Tc(MIN.) = 12.60
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1345.00 = 1385.00 FEET.

*****
FLOW PROCESS FROM NODE 1344.00 TO NODE 1345.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 12.60
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.645
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                C      5.20      0.25      1.00      79
NATURAL FAIR COVER
"OPEN BRUSH"          C      1.60      0.25      1.00      77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 6.80      SUBAREA RUNOFF(CFS) = 20.78
EFFECTIVE AREA(ACRES) = 11.90      AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25      AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 11.90      PEAK FLOW RATE(CFS) = 36.36

*****
FLOW PROCESS FROM NODE 1345.00 TO NODE 1346.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 875.00 DOWNSTREAM(FEET) = 845.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 497.00 CHANNEL SLOPE = 0.0604
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 36.36
FLOW VELOCITY(FEET/SEC.) = 7.81 FLOW DEPTH(FEET) = 1.38
TRAVEL TIME(MIN.) = 1.06 Tc(MIN.) = 13.66
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1346.00 = 1882.00 FEET.

*****
FLOW PROCESS FROM NODE 1345.00 TO NODE 1346.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 13.66
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.493
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN

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NATURAL FAIR COVER
"GRASS"                B      0.90      0.30      1.00      69
NATURAL FAIR COVER
"GRASS"                C      9.30      0.25      1.00      79
NATURAL FAIR COVER
"OPEN BRUSH"          C      0.10      0.25      1.00      77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 10.30      SUBAREA RUNOFF(CFS) = 30.02
EFFECTIVE AREA(ACRES) = 22.20      AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25      AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 22.20      PEAK FLOW RATE(CFS) = 64.75

*****
FLOW PROCESS FROM NODE 1346.00 TO NODE 1347.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 845.00 DOWNSTREAM(FEET) = 700.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 667.00 CHANNEL SLOPE = 0.2174
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 64.75
FLOW VELOCITY(FEET/SEC.) = 14.58 FLOW DEPTH(FEET) = 1.33
TRAVEL TIME(MIN.) = 0.76 Tc(MIN.) = 14.42
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1347.00 = 2549.00 FEET.

*****
FLOW PROCESS FROM NODE 1346.00 TO NODE 1347.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 14.42
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.383
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                B      0.60      0.30      1.00      69
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      0.70      0.25      1.00      75
NATURAL FAIR COVER
"GRASS"                C      6.40      0.25      1.00      79
NATURAL FAIR COVER
"OPEN BRUSH"          C      1.30      0.25      1.00      77
NATURAL FAIR COVER
"WOODLAND"            C      0.80      0.25      1.00      73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 9.80      SUBAREA RUNOFF(CFS) = 27.60
EFFECTIVE AREA(ACRES) = 32.00      AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25      AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 32.00      PEAK FLOW RATE(CFS) = 90.16

*****
FLOW PROCESS FROM NODE 1347.00 TO NODE 1348.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 700.00 DOWNSTREAM(FEET) = 625.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 450.00 CHANNEL SLOPE = 0.1667
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 90.16
FLOW VELOCITY(FEET/SEC.) = 14.38 FLOW DEPTH(FEET) = 1.70
TRAVEL TIME(MIN.) = 0.52 Tc(MIN.) = 14.95
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1348.00 = 2999.00 FEET.

*****
FLOW PROCESS FROM NODE 1347.00 TO NODE 1348.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 14.95
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.308
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS

```

LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
NATURAL FAIR COVER					
"GRASS"	B	0.10	0.30	1.00	69
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	C	2.60	0.25	1.00	75
NATURAL FAIR COVER					
"GRASS"	C	11.30	0.25	1.00	79
NATURAL FAIR COVER					
"OPEN BRUSH"	C	6.00	0.25	1.00	77
NATURAL FAIR COVER					
"WOODLAND"	C	0.50	0.25	1.00	73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 20.50 SUBAREA RUNOFF (CFS) = 56.41					
EFFECTIVE AREA (ACRES) = 52.50 AREA-AVERAGED Fm (INCH/HR) = 0.25					
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00					
TOTAL AREA (ACRES) = 52.50 PEAK FLOW RATE (CFS) = 144.40					

FLOW PROCESS FROM NODE 1348.00 TO NODE 1349.00 IS CODE = 51					

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<					
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<					

ELEVATION DATA: UPSTREAM (FEET) = 625.00 DOWNSTREAM (FEET) = 465.00					
CHANNEL LENGTH THRU SUBAREA (FEET) = 1511.00 CHANNEL SLOPE = 0.1059					
CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000					
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00					
CHANNEL FLOW THRU SUBAREA (CFS) = 144.40					
FLOW VELOCITY (FEET/SEC.) = 13.60 FLOW DEPTH (FEET) = 2.09					
TRAVEL TIME (MIN.) = 1.85 Tc (MIN.) = 16.80					
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1349.00 = 4510.00 FEET.					

FLOW PROCESS FROM NODE 1348.00 TO NODE 1349.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

MAINLINE Tc (MIN) = 16.80					
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.099					
SUBAREA LOSS RATE DATA (AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL POOR COVER					
"BARREN"	B	0.10	0.30	1.00	86
NATURAL FAIR COVER					
"OPEN BRUSH"	B	1.00	0.30	1.00	66
NATURAL FAIR COVER					
"WOODLAND"	B	0.40	0.30	1.00	60
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	C	2.10	0.25	1.00	75
NATURAL POOR COVER					
"BARREN"	C	1.00	0.25	1.00	91
NATURAL FAIR COVER					
"GRASS"	C	8.10	0.25	1.00	79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 12.70 SUBAREA RUNOFF (CFS) = 32.49					
EFFECTIVE AREA (ACRES) = 65.20 AREA-AVERAGED Fm (INCH/HR) = 0.25					
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00					
TOTAL AREA (ACRES) = 65.20 PEAK FLOW RATE (CFS) = 167.01					

FLOW PROCESS FROM NODE 1348.00 TO NODE 1349.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

MAINLINE Tc (MIN) = 16.80					
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.099					
SUBAREA LOSS RATE DATA (AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"OPEN BRUSH"	C	15.20	0.25	1.00	77
NATURAL FAIR COVER					
"WOODLAND"	C	6.70	0.25	1.00	73
NATURAL POOR COVER					
"BARREN"	D	1.10	0.20	1.00	93
NATURAL FAIR COVER					

"GRASS"	D	3.50	0.20	1.00	84
NATURAL FAIR COVER					
"OPEN BRUSH"	D	1.70	0.20	1.00	83
NATURAL FAIR COVER					
"WOODLAND"	D	3.60	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA (ACRES) = 31.80 SUBAREA RUNOFF (CFS) = 81.97					
EFFECTIVE AREA (ACRES) = 97.00 AREA-AVERAGED Fm (INCH/HR) = 0.25					
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00					
TOTAL AREA (ACRES) = 97.00 PEAK FLOW RATE (CFS) = 248.98					

FLOW PROCESS FROM NODE 1349.00 TO NODE 1350.00 IS CODE = 51					

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<					
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<					

ELEVATION DATA: UPSTREAM (FEET) = 465.00 DOWNSTREAM (FEET) = 405.00					
CHANNEL LENGTH THRU SUBAREA (FEET) = 1128.00 CHANNEL SLOPE = 0.0532					
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000					
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00					
CHANNEL FLOW THRU SUBAREA (CFS) = 248.98					
FLOW VELOCITY (FEET/SEC.) = 12.06 FLOW DEPTH (FEET) = 2.96					
TRAVEL TIME (MIN.) = 1.56 Tc (MIN.) = 18.36					
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1350.00 = 5638.00 FEET.					

FLOW PROCESS FROM NODE 1349.00 TO NODE 1350.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

MAINLINE Tc (MIN) = 18.36					
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.944					
SUBAREA LOSS RATE DATA (AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	B	1.80	0.30	1.00	63
RESIDENTIAL					
"5-7 DWELLINGS/ACRE"	B	3.80	0.30	0.50	56
NATURAL POOR COVER					
"BARREN"	B	1.10	0.30	1.00	86
NATURAL FAIR COVER					
"GRASS"	B	3.20	0.30	1.00	69
NATURAL FAIR COVER					
"OPEN BRUSH"	B	1.50	0.30	1.00	66
PUBLIC PARK	B	0.40	0.30	0.85	56
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.30					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.83					
SUBAREA AREA (ACRES) = 11.80 SUBAREA RUNOFF (CFS) = 28.61					
EFFECTIVE AREA (ACRES) = 108.80 AREA-AVERAGED Fm (INCH/HR) = 0.25					
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98					
TOTAL AREA (ACRES) = 108.80 PEAK FLOW RATE (CFS) = 264.15					

FLOW PROCESS FROM NODE 1349.00 TO NODE 1350.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

MAINLINE Tc (MIN) = 18.36					
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.944					
SUBAREA LOSS RATE DATA (AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"WOODLAND"	B	3.80	0.30	1.00	60
NATURAL FAIR COVER					
"CHAPARRAL,BROADLEAF"	C	0.70	0.25	1.00	75
RESIDENTIAL					
"5-7 DWELLINGS/ACRE"	C	3.60	0.25	0.50	69
NATURAL POOR COVER					
"BARREN"	C	1.60	0.25	1.00	91
NATURAL FAIR COVER					
"GRASS"	C	5.10	0.25	1.00	79
NATURAL FAIR COVER					
"OPEN BRUSH"	C	15.90	0.25	1.00	77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26					

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
SUBAREA AREA (ACRES) = 30.70 SUBAREA RUNOFF (CFS) = 74.68
EFFECTIVE AREA (ACRES) = 139.50 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 139.50 PEAK FLOW RATE (CFS) = 338.83

FLOW PROCESS FROM NODE 1349.00 TO NODE 1350.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 18.36
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.944
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" C 11.30 0.25 1.00 73
RESIDENTIAL
"5-7 DWELLINGS/ACRE" D 0.40 0.20 0.50 75
NATURAL POOR COVER
"BARREN" D 0.20 0.20 1.00 93
NATURAL FAIR COVER
"GRASS" D 0.60 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 0.50 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 0.50 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA (ACRES) = 13.50 SUBAREA RUNOFF (CFS) = 32.87
EFFECTIVE AREA (ACRES) = 153.00 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 153.00 PEAK FLOW RATE (CFS) = 371.70

FLOW PROCESS FROM NODE 1350.00 TO NODE 1351.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 405.00 DOWNSTREAM (FEET) = 360.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1805.00 CHANNEL SLOPE = 0.0249
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 371.70
FLOW VELOCITY (FEET/SEC.) = 10.04 FLOW DEPTH (FEET) = 4.08
TRAVEL TIME (MIN.) = 3.00 Tc (MIN.) = 21.36
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1351.00 = 7443.00 FEET.

FLOW PROCESS FROM NODE 1350.00 TO NODE 1351.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 21.36
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.697
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" B 3.80 0.30 0.50 56
NATURAL POOR COVER
"BARREN" B 5.10 0.30 1.00 86
NATURAL FAIR COVER
"GRASS" B 1.10 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 4.40 0.30 1.00 66
NATURAL FAIR COVER
"WOODLAND" B 6.60 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C 3.80 0.25 1.00 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.29
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.92
SUBAREA AREA (ACRES) = 24.80 SUBAREA RUNOFF (CFS) = 54.19
EFFECTIVE AREA (ACRES) = 177.80 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 177.80 PEAK FLOW RATE (CFS) = 391.81

FLOW PROCESS FROM NODE 1350.00 TO NODE 1351.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 21.36
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.697
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" C 2.70 0.25 0.50 69
NATURAL POOR COVER
"BARREN" C 12.50 0.25 1.00 91
NATURAL FAIR COVER
"GRASS" C 1.10 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 11.90 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 5.20 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" D 0.50 0.20 1.00 81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96
SUBAREA AREA (ACRES) = 33.90 SUBAREA RUNOFF (CFS) = 74.98
EFFECTIVE AREA (ACRES) = 211.70 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 211.70 PEAK FLOW RATE (CFS) = 466.80

FLOW PROCESS FROM NODE 1350.00 TO NODE 1351.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 21.36
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.697
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" D 1.40 0.20 0.50 75
NATURAL POOR COVER
"BARREN" D 6.30 0.20 1.00 93
NATURAL FAIR COVER
"GRASS" D 0.40 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 3.80 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 3.10 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.95
SUBAREA AREA (ACRES) = 15.00 SUBAREA RUNOFF (CFS) = 33.84
EFFECTIVE AREA (ACRES) = 226.70 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 226.70 PEAK FLOW RATE (CFS) = 500.63

FLOW PROCESS FROM NODE 1351.00 TO NODE 1352.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 360.00 DOWNSTREAM (FEET) = 325.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1429.00 CHANNEL SLOPE = 0.0245
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 500.63
FLOW VELOCITY (FEET/SEC.) = 10.76 FLOW DEPTH (FEET) = 4.76
TRAVEL TIME (MIN.) = 2.21 Tc (MIN.) = 23.57
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1352.00 = 8872.00 FEET.

FLOW PROCESS FROM NODE 1351.00 TO NODE 1352.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 23.57
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.546
SUBAREA LOSS RATE DATA (AMC II):


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DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL POOR COVER
"BARREN"            B       1.70   0.30   1.00   86
NATURAL FAIR COVER
"GRASS"             B       4.50   0.30   1.00   69
NATURAL FAIR COVER
"OPEN BRUSH"       B       4.70   0.30   1.00   66
NATURAL FAIR COVER
"WOODLAND"         B       5.10   0.30   1.00   60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C       3.40   0.25   1.00   75
NATURAL FAIR COVER
"GRASS"             C       1.30   0.25   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.29
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 20.70 SUBAREA RUNOFF (CFS) = 42.05
EFFECTIVE AREA (ACRES) = 247.40 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 247.40 PEAK FLOW RATE (CFS) = 511.86

*****
FLOW PROCESS FROM NODE 1351.00 TO NODE 1352.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 23.57
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.546
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"       C       12.40  0.25   1.00   77
NATURAL FAIR COVER
"WOODLAND"         C       3.20   0.25   1.00   73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D       0.40   0.20   1.00   81
NATURAL POOR COVER
"BARREN"           D       0.30   0.20   1.00   93
NATURAL FAIR COVER
"GRASS"            D       1.50   0.20   1.00   84
NATURAL FAIR COVER
"OPEN BRUSH"       D       0.20   0.20   1.00   83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 18.00 SUBAREA RUNOFF (CFS) = 37.30
EFFECTIVE AREA (ACRES) = 265.40 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 265.40 PEAK FLOW RATE (CFS) = 549.16

*****
FLOW PROCESS FROM NODE 1351.00 TO NODE 1352.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 23.57
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.546
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND"         D       3.10   0.20   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 3.10 SUBAREA RUNOFF (CFS) = 6.55
EFFECTIVE AREA (ACRES) = 268.50 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 268.50 PEAK FLOW RATE (CFS) = 555.71

*****
FLOW PROCESS FROM NODE 1352.00 TO NODE 1353.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 325.00 DOWNSTREAM (FEET) = 290.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1774.00 CHANNEL SLOPE = 0.0197
CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00

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CHANNEL FLOW THRU SUBAREA (CFS) = 555.71
FLOW VELOCITY (FEET/SEC.) = 10.17 FLOW DEPTH (FEET) = 4.98
TRAVEL TIME (MIN.) = 2.91 Tc (MIN.) = 26.47
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1353.00 = 10646.00 FEET.

*****
FLOW PROCESS FROM NODE 1352.00 TO NODE 1353.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 26.47
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.383
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"             B       7.50   0.30   1.00   69
COMMERCIAL          B       0.10   0.30   0.10   56
PUBLIC PARK         B       0.20   0.30   0.85   56
NATURAL FAIR COVER
"OPEN BRUSH"       B       3.00   0.30   1.00   66
NATURAL FAIR COVER
"WOODLAND"         B       3.90   0.30   1.00   60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C       1.60   0.25   1.00   75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA (ACRES) = 16.30 SUBAREA RUNOFF (CFS) = 30.67
EFFECTIVE AREA (ACRES) = 284.80 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 284.80 PEAK FLOW RATE (CFS) = 555.71
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1352.00 TO NODE 1353.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 26.47
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.383
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"             C       2.20   0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"       C       12.30  0.25   1.00   77
NATURAL FAIR COVER
"WOODLAND"         C       11.90  0.25   1.00   73
NATURAL FAIR COVER
"GRASS"             D       4.50   0.20   1.00   84
COMMERCIAL          D       0.20   0.20   0.10   75
PUBLIC PARK         D       1.10   0.20   0.85   75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA (ACRES) = 32.20 SUBAREA RUNOFF (CFS) = 62.15
EFFECTIVE AREA (ACRES) = 317.00 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 317.00 PEAK FLOW RATE (CFS) = 609.23

*****
FLOW PROCESS FROM NODE 1352.00 TO NODE 1353.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 26.47
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.383
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"       D       1.00   0.20   1.00   83
NATURAL FAIR COVER
"WOODLAND"         D       2.80   0.20   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 3.80 SUBAREA RUNOFF (CFS) = 7.47
EFFECTIVE AREA (ACRES) = 320.80 AREA-AVERAGED Fm (INCH/HR) = 0.25

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AREA-AVERAGED Fp(INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.97
TOTAL AREA(ACRES) = 320.80  PEAK FLOW RATE(CFS) = 616.69
*****
FLOW PROCESS FROM NODE 1353.00 TO NODE 1354.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 290.00  DOWNSTREAM(FEET) = 240.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 681.00  CHANNEL SLOPE = 0.0734
CHANNEL BASE(FEET) = 6.00  "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040  MAXIMUM DEPTH(FEET) = 6.00
CHANNEL FLOW THRU SUBAREA(CFS) = 616.69
FLOW VELOCITY(FEET/SEC.) = 17.01  FLOW DEPTH(FEET) = 3.73
TRAVEL TIME(MIN.) = 0.67  Tc(MIN.) = 27.14
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1354.00 = 11327.00 FEET.
*****
FLOW PROCESS FROM NODE 1353.00 TO NODE 1354.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 27.14
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.349
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
LAND USE      GROUP      (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"OPEN BRUSH"      A      0.10      0.40      1.00      46
NATURAL FAIR COVER
"OPEN BRUSH"      B      0.10      0.30      1.00      66
NATURAL FAIR COVER
"GRASS"      C      0.50      0.25      1.00      79
NATURAL FAIR COVER
"OPEN BRUSH"      C      0.50      0.25      1.00      77
COMMERCIAL      C      0.60      0.25      0.10      69
NATURAL FAIR COVER
"WOODLAND"      C      1.50      0.25      1.00      73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.84
SUBAREA AREA(ACRES) = 3.30  SUBAREA RUNOFF(CFS) = 6.34
EFFECTIVE AREA(ACRES) = 324.10  AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.97
TOTAL AREA(ACRES) = 324.10  PEAK FLOW RATE(CFS) = 616.69
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****
FLOW PROCESS FROM NODE 1353.00 TO NODE 1354.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 27.14
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.349
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
LAND USE      GROUP      (ACRES)  (INCH/HR)  (DECIMAL)  CN
PUBLIC PARK      D      0.10      0.20      0.85      75
NATURAL FAIR COVER
"OPEN BRUSH"      D      2.10      0.20      1.00      83
COMMERCIAL      D      0.20      0.20      0.10      75
NATURAL FAIR COVER
"WOODLAND"      D      0.20      0.20      1.00      79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
SUBAREA AREA(ACRES) = 2.60  SUBAREA RUNOFF(CFS) = 5.06
EFFECTIVE AREA(ACRES) = 326.70  AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.97
TOTAL AREA(ACRES) = 326.70  PEAK FLOW RATE(CFS) = 618.07
*****
FLOW PROCESS FROM NODE 1354.00 TO NODE 1354.00 IS CODE = 1
-----
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
-----
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
TIME OF CONCENTRATION(MIN.) = 27.14

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RAINFALL INTENSITY(INCH/HR) = 2.35
AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25
AREA-AVERAGED Ap = 0.97
EFFECTIVE STREAM AREA(ACRES) = 326.70
TOTAL STREAM AREA(ACRES) = 326.70
PEAK FLOW RATE(CFS) AT CONFLUENCE = 618.07
*****
** CONFLUENCE DATA **
STREAM      Q      Tc      Intensity      Fp(Fm)      Ap      Ae      HEADWATER
NUMBER      (CFS)  (MIN.)  (INCH/HR)  (INCH/HR)  (ACRES)  NODE
1      4387.70  33.04      2.104  0.25( 0.24)  0.98  2621.9  1300.00
1      4310.56  34.29      2.057  0.25( 0.24)  0.98  2643.3  1320.00
2      618.07  27.14      2.349  0.25( 0.25)  0.97  326.7  1340.00
*****
RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
CONFLUENCE FORMULA USED FOR 2 STREAMS.
*****
** PEAK FLOW RATE TABLE **
STREAM      Q      Tc      Intensity      Fp(Fm)      Ap      Ae      HEADWATER
NUMBER      (CFS)  (MIN.)  (INCH/HR)  (INCH/HR)  (ACRES)  NODE
1      4695.64  27.14      2.349  0.25( 0.25)  0.98  2480.4  1340.00
2      4933.96  33.04      2.104  0.25( 0.25)  0.98  2948.6  1300.00
3      4842.86  34.29      2.057  0.25( 0.25)  0.98  2970.0  1320.00
*****
COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) = 4933.96  Tc(MIN.) = 33.04
EFFECTIVE AREA(ACRES) = 2948.62  AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 2970.00
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1354.00 = 16507.00 FEET.
*****
FLOW PROCESS FROM NODE 1354.00 TO NODE 1376.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 240.00  DOWNSTREAM(FEET) = 216.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 3182.00  CHANNEL SLOPE = 0.0075
CHANNEL BASE(FEET) = 85.00  "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.030  MAXIMUM DEPTH(FEET) = 15.00
CHANNEL FLOW THRU SUBAREA(CFS) = 4933.96
FLOW VELOCITY(FEET/SEC.) = 11.15  FLOW DEPTH(FEET) = 4.69
TRAVEL TIME(MIN.) = 4.75  Tc(MIN.) = 37.80
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1376.00 = 19689.00 FEET.
*****
FLOW PROCESS FROM NODE 1354.00 TO NODE 1376.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 37.80
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.946
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL      AREA      Fp      Ap      SCS
LAND USE      GROUP      (ACRES)  (INCH/HR)  (DECIMAL)  CN
PUBLIC PARK      A      5.40      0.40      0.85      32
RESIDENTIAL
"5-7 DWELLINGS/ACRE"      A      3.80      0.40      0.50      32
NATURAL POOR COVER
"BARREN"      A      8.50      0.40      1.00      78
NATURAL FAIR COVER
"GRASS"      A      4.80      0.40      1.00      50
URBAN FAIR COVER
"TURF"      A      18.80      0.40      1.00      44
NATURAL FAIR COVER
"OPEN BRUSH"      A      4.00      0.40      1.00      46
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
SUBAREA AREA(ACRES) = 45.30  SUBAREA RUNOFF(CFS) = 64.01
EFFECTIVE AREA(ACRES) = 2993.92  AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 3015.30  PEAK FLOW RATE(CFS) = 4933.96
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****
FLOW PROCESS FROM NODE 1354.00 TO NODE 1376.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 37.80
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.946
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" A      2.30   0.40   1.00  40
NATURAL FAIR COVER
"WOODLAND"           A      3.30   0.40   1.00  36
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      3.50   0.25   1.00  75
NATURAL FAIR COVER
"GRASS"              C      0.80   0.25   1.00  79
NATURAL FAIR COVER
"OPEN BRUSH"        C      3.00   0.25   1.00  77
COMMERCIAL          C      2.70   0.25   0.10  69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.31
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.84
SUBAREA AREA(ACRES) = 15.60   SUBAREA RUNOFF(CFS) = 23.60
EFFECTIVE AREA(ACRES) = 3009.52   AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25   AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 3030.90   PEAK FLOW RATE(CFS) = 4933.96
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1354.00 TO NODE 1376.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 37.80
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.946
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND"           C      11.70  0.25   1.00  73
PUBLIC PARK          D      20.40  0.20   0.85  75
NATURAL FAIR COVER
"GRASS"              D      4.60   0.20   1.00  84
URBAN FAIR COVER
"TURF"               D      0.20   0.20   1.00  82
NATURAL FAIR COVER
"OPEN BRUSH"        D      6.10   0.20   1.00  83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
SUBAREA AREA(ACRES) = 43.00   SUBAREA RUNOFF(CFS) = 67.60
EFFECTIVE AREA(ACRES) = 3052.52   AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25   AREA-AVERAGED Ap = 0.98
TOTAL AREA(ACRES) = 3073.90   PEAK FLOW RATE(CFS) = 4933.96
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1376.00 TO NODE 1376.00 IS CODE = 1
-----
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
=====
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
TIME OF CONCENTRATION(MIN.) = 37.80
RAINFALL INTENSITY(INCH/HR) = 1.95
AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25
AREA-AVERAGED Ap = 0.98
EFFECTIVE STREAM AREA(ACRES) = 3052.52
TOTAL STREAM AREA(ACRES) = 3073.90
PEAK FLOW RATE(CFS) AT CONFLUENCE = 4933.96

*****
FLOW PROCESS FROM NODE 1360.00 TO NODE 1361.00 IS CODE = 21
-----
>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
=====
INITIAL SUBAREA FLOW-LENGTH( FEET) = 322.00
ELEVATION DATA: UPSTREAM( FEET) = 1110.00   DOWNSTREAM( FEET) = 1035.00
Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

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SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.517
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.303
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS   Tc
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
NATURAL FAIR COVER
"GRASS"              C      0.50   0.25   1.00  79  9.52
NATURAL FAIR COVER
"WOODLAND"           C      0.20   0.25   1.00  73  9.52
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA RUNOFF(CFS) = 2.55
TOTAL AREA(ACRES) = 0.70   PEAK FLOW RATE(CFS) = 2.55

*****
FLOW PROCESS FROM NODE 1361.00 TO NODE 1362.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM( FEET) = 1035.00   DOWNSTREAM( FEET) = 975.00
CHANNEL LENGTH THRU SUBAREA( FEET) = 166.00   CHANNEL SLOPE = 0.3614
CHANNEL BASE( FEET) = 1.00   "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH( FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 2.55
FLOW VELOCITY( FEET/SEC.) = 7.45   FLOW DEPTH( FEET) = 0.27
TRAVEL TIME(MIN.) = 0.37   Tc(MIN.) = 9.89
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1362.00 = 488.00 FEET.

*****
FLOW PROCESS FROM NODE 1361.00 TO NODE 1362.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 9.89
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.193
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              C      0.10   0.25   1.00  79
NATURAL FAIR COVER
"WOODLAND"           C      0.50   0.25   1.00  73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 0.60   SUBAREA RUNOFF(CFS) = 2.13
EFFECTIVE AREA(ACRES) = 1.30   AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25   AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 1.30   PEAK FLOW RATE(CFS) = 4.61

*****
FLOW PROCESS FROM NODE 1362.00 TO NODE 1363.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM( FEET) = 975.00   DOWNSTREAM( FEET) = 950.00
CHANNEL LENGTH THRU SUBAREA( FEET) = 143.00   CHANNEL SLOPE = 0.1748
CHANNEL BASE( FEET) = 1.00   "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH( FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 4.61
FLOW VELOCITY( FEET/SEC.) = 6.86   FLOW DEPTH( FEET) = 0.46
TRAVEL TIME(MIN.) = 0.35   Tc(MIN.) = 10.24
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1363.00 = 631.00 FEET.

*****
FLOW PROCESS FROM NODE 1362.00 TO NODE 1363.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 10.24
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.113
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              C      0.40   0.25   1.00  79
NATURAL FAIR COVER
"WOODLAND"           C      0.80   0.25   1.00  73

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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.20 SUBAREA RUNOFF (CFS) = 4.17
EFFECTIVE AREA (ACRES) = 2.50 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 2.50 PEAK FLOW RATE (CFS) = 8.69

FLOW PROCESS FROM NODE 1363.00 TO NODE 1364.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 950.00 DOWNSTREAM (FEET) = 925.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 136.00 CHANNEL SLOPE = 0.1838
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 8.69
FLOW VELOCITY (FEET/SEC.) = 8.32 FLOW DEPTH (FEET) = 0.64
TRAVEL TIME (MIN.) = 0.27 Tc (MIN.) = 10.51
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1364.00 = 767.00 FEET.

FLOW PROCESS FROM NODE 1363.00 TO NODE 1364.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 10.51
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.058
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 1.40 0.25 1.00 79
NATURAL FAIR COVER
"WOODLAND" C 0.90 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.30 SUBAREA RUNOFF (CFS) = 7.88
EFFECTIVE AREA (ACRES) = 4.80 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 4.80 PEAK FLOW RATE (CFS) = 16.45

FLOW PROCESS FROM NODE 1364.00 TO NODE 1365.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 925.00 DOWNSTREAM (FEET) = 875.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 146.00 CHANNEL SLOPE = 0.3425
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 16.45
FLOW VELOCITY (FEET/SEC.) = 12.30 FLOW DEPTH (FEET) = 0.76
TRAVEL TIME (MIN.) = 0.20 Tc (MIN.) = 10.71
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1365.00 = 913.00 FEET.

FLOW PROCESS FROM NODE 1364.00 TO NODE 1365.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 10.71
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.019
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 2.00 0.25 1.00 79
NATURAL FAIR COVER
"WOODLAND" C 0.90 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.90 SUBAREA RUNOFF (CFS) = 9.84
EFFECTIVE AREA (ACRES) = 7.70 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 7.70 PEAK FLOW RATE (CFS) = 26.12

FLOW PROCESS FROM NODE 1365.00 TO NODE 1366.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 875.00 DOWNSTREAM (FEET) = 800.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 310.00 CHANNEL SLOPE = 0.2419
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 26.12
FLOW VELOCITY (FEET/SEC.) = 11.84 FLOW DEPTH (FEET) = 0.79
TRAVEL TIME (MIN.) = 0.44 Tc (MIN.) = 11.14
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1366.00 = 1223.00 FEET.

FLOW PROCESS FROM NODE 1365.00 TO NODE 1366.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 11.14
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.931
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 1.40 0.25 1.00 79
NATURAL FAIR COVER
"WOODLAND" C 1.70 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 3.10 SUBAREA RUNOFF (CFS) = 10.27
EFFECTIVE AREA (ACRES) = 10.80 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 10.80 PEAK FLOW RATE (CFS) = 35.78

FLOW PROCESS FROM NODE 1366.00 TO NODE 1367.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 800.00 DOWNSTREAM (FEET) = 775.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 145.00 CHANNEL SLOPE = 0.1724
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 35.78
FLOW VELOCITY (FEET/SEC.) = 11.42 FLOW DEPTH (FEET) = 1.03
TRAVEL TIME (MIN.) = 0.21 Tc (MIN.) = 11.35
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1367.00 = 1368.00 FEET.

FLOW PROCESS FROM NODE 1366.00 TO NODE 1367.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 11.35
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.889
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 3.80 0.25 1.00 79
NATURAL FAIR COVER
"WOODLAND" C 2.00 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 0.30 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 6.10 SUBAREA RUNOFF (CFS) = 19.99
EFFECTIVE AREA (ACRES) = 16.90 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 16.90 PEAK FLOW RATE (CFS) = 55.36

FLOW PROCESS FROM NODE 1367.00 TO NODE 1368.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 775.00 DOWNSTREAM(FEET) = 675.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 335.00 CHANNEL SLOPE = 0.2985
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 55.36
FLOW VELOCITY(FEET/SEC.) = 15.72 FLOW DEPTH(FEET) = 1.13
TRAVEL TIME(MIN.) = 0.36 Tc(MIN.) = 11.71
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1368.00 = 1703.00 FEET.

FLOW PROCESS FROM NODE 1367.00 TO NODE 1368.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 11.71
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.818
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 5.30 0.25 1.00 79
NATURAL FAIR COVER
"WOODLAND" C 1.70 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 0.30 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 7.30 SUBAREA RUNOFF(CFS) = 23.46
EFFECTIVE AREA (ACRES) = 24.20 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 24.20 PEAK FLOW RATE (CFS) = 77.74

FLOW PROCESS FROM NODE 1368.00 TO NODE 1369.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 675.00 DOWNSTREAM(FEET) = 575.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 837.00 CHANNEL SLOPE = 0.1195
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 77.74
FLOW VELOCITY(FEET/SEC.) = 12.23 FLOW DEPTH(FEET) = 1.71
TRAVEL TIME(MIN.) = 1.14 Tc(MIN.) = 12.85
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1369.00 = 2540.00 FEET.

FLOW PROCESS FROM NODE 1368.00 TO NODE 1369.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 12.85
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.610
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.70 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 3.10 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 2.50 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 6.30 SUBAREA RUNOFF(CFS) = 19.05
EFFECTIVE AREA (ACRES) = 30.50 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 30.50 PEAK FLOW RATE (CFS) = 92.25

FLOW PROCESS FROM NODE 1369.00 TO NODE 1370.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 575.00 DOWNSTREAM(FEET) = 507.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 524.00 CHANNEL SLOPE = 0.1298

CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 92.25
FLOW VELOCITY(FEET/SEC.) = 13.18 FLOW DEPTH(FEET) = 1.83
TRAVEL TIME(MIN.) = 0.66 Tc(MIN.) = 13.51
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1370.00 = 3064.00 FEET.

FLOW PROCESS FROM NODE 1369.00 TO NODE 1370.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 13.51
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.514
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL POOR COVER
"BARREN" C 0.10 0.25 1.00 91
NATURAL FAIR COVER
"GRASS" C 1.60 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 8.10 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 6.90 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 0.10 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 1.10 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 17.90 SUBAREA RUNOFF(CFS) = 52.64
EFFECTIVE AREA (ACRES) = 48.40 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 48.40 PEAK FLOW RATE (CFS) = 142.27

FLOW PROCESS FROM NODE 1370.00 TO NODE 1371.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 507.00 DOWNSTREAM(FEET) = 395.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 714.00 CHANNEL SLOPE = 0.1569
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 142.27
FLOW VELOCITY(FEET/SEC.) = 15.66 FLOW DEPTH(FEET) = 1.87
TRAVEL TIME(MIN.) = 0.76 Tc(MIN.) = 14.27
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1371.00 = 3778.00 FEET.

FLOW PROCESS FROM NODE 1370.00 TO NODE 1371.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 14.27
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.405
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.10 0.25 1.00 75
NATURAL POOR COVER
"BARREN" C 3.60 0.25 1.00 91
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 2.70 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 1.50 0.25 1.00 73
NATURAL FAIR COVER
"OPEN BRUSH" D 0.10 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 8.40 SUBAREA RUNOFF(CFS) = 23.85
EFFECTIVE AREA (ACRES) = 56.80 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 56.80 PEAK FLOW RATE (CFS) = 161.36

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*****
FLOW PROCESS FROM NODE 1371.00 TO NODE 1372.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 395.00 DOWNSTREAM(FEET) = 384.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 216.00 CHANNEL SLOPE = 0.0509
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 161.36
FLOW VELOCITY(FEET/SEC.) = 10.67 FLOW DEPTH(FEET) = 2.67
TRAVEL TIME(MIN.) = 0.34 Tc(MIN.) = 14.61
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1372.00 = 3994.00 FEET.
*****
FLOW PROCESS FROM NODE 1371.00 TO NODE 1372.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 14.61
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.356
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      1.90   0.25   1.00  75
NATURAL POOR COVER
"BARREN"             C      4.00   0.25   1.00  91
NATURAL FAIR COVER
"GRASS"              C     18.30  0.25   1.00  79
NATURAL FAIR COVER
"OPEN BRUSH"        C     11.70  0.25   1.00  77
NATURAL FAIR COVER
"WOODLAND"          C      0.50   0.25   1.00  73
NATURAL POOR COVER
"BARREN"            D      1.70   0.20   1.00  93
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 38.10 SUBAREA RUNOFF(CFS) = 106.59
EFFECTIVE AREA(ACRES) = 94.90 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 94.90 PEAK FLOW RATE(CFS) = 265.47
*****
FLOW PROCESS FROM NODE 1371.00 TO NODE 1372.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 14.61
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.356
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              D      3.30   0.20   1.00  84
NATURAL FAIR COVER
"OPEN BRUSH"        D      0.10   0.20   1.00  83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 3.40 SUBAREA RUNOFF(CFS) = 9.66
EFFECTIVE AREA(ACRES) = 98.30 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 98.30 PEAK FLOW RATE(CFS) = 275.13
*****
FLOW PROCESS FROM NODE 1372.00 TO NODE 1373.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 384.00 DOWNSTREAM(FEET) = 325.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1435.00 CHANNEL SLOPE = 0.0411
CHANNEL BASE(FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 4.00
CHANNEL FLOW THRU SUBAREA(CFS) = 275.13
FLOW VELOCITY(FEET/SEC.) = 11.24 FLOW DEPTH(FEET) = 3.34
TRAVEL TIME(MIN.) = 2.13 Tc(MIN.) = 16.74

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LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1373.00 = 5429.00 FEET.
*****
FLOW PROCESS FROM NODE 1372.00 TO NODE 1373.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 16.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.105
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B      2.70   0.30   1.00  63
NATURAL FAIR COVER
"GRASS"              B      0.20   0.30   1.00  69
NATURAL FAIR COVER
"OPEN BRUSH"        B      0.70   0.30   1.00  66
NATURAL FAIR COVER
"WOODLAND"          B      2.40   0.30   1.00  60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      9.70   0.25   1.00  75
NATURAL POOR COVER
"BARREN"             C      2.90   0.25   1.00  91
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 18.60 SUBAREA RUNOFF(CFS) = 47.53
EFFECTIVE AREA(ACRES) = 116.90 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 116.90 PEAK FLOW RATE(CFS) = 300.46
*****
FLOW PROCESS FROM NODE 1372.00 TO NODE 1373.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 16.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.105
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              C      9.50   0.25   1.00  79
NATURAL FAIR COVER
"OPEN BRUSH"        C     14.20  0.25   1.00  77
NATURAL FAIR COVER
"WOODLAND"          C      4.60   0.25   1.00  73
NATURAL POOR COVER
"BARREN"            D      1.60   0.20   1.00  93
NATURAL FAIR COVER
"GRASS"              D      0.30   0.20   1.00  84
NATURAL FAIR COVER
"OPEN BRUSH"        D      0.20   0.20   1.00  83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 30.40 SUBAREA RUNOFF(CFS) = 78.22
EFFECTIVE AREA(ACRES) = 147.30 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 147.30 PEAK FLOW RATE(CFS) = 378.68
*****
FLOW PROCESS FROM NODE 1373.00 TO NODE 1374.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 325.00 DOWNSTREAM(FEET) = 280.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1269.00 CHANNEL SLOPE = 0.0355
CHANNEL BASE(FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 5.00
CHANNEL FLOW THRU SUBAREA(CFS) = 378.68
FLOW VELOCITY(FEET/SEC.) = 11.50 FLOW DEPTH(FEET) = 3.76
TRAVEL TIME(MIN.) = 1.84 Tc(MIN.) = 18.58
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1374.00 = 6698.00 FEET.
*****
FLOW PROCESS FROM NODE 1373.00 TO NODE 1374.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

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MAINLINE Tc(MIN) = 18.58
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.925
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B      1.30   0.30   1.00   63
NATURAL FAIR COVER
"GRASS"              B      0.10   0.30   1.00   69
NATURAL FAIR COVER
"OPEN BRUSH"         B      7.30   0.30   1.00   66
NATURAL FAIR COVER
"WOODLAND"          B      3.30   0.30   1.00   60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      6.00   0.25   1.00   75
NATURAL FAIR COVER
"GRASS"              C      2.40   0.25   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.28
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 20.40 SUBAREA RUNOFF (CFS) = 48.58
EFFECTIVE AREA (ACRES) = 167.70 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 167.70 PEAK FLOW RATE (CFS) = 403.38

*****
FLOW PROCESS FROM NODE 1373.00 TO NODE 1374.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 18.58
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.925
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"         C     14.60  0.25   1.00   77
NATURAL FAIR COVER
"WOODLAND"          C      4.40  0.25   1.00   73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D      0.20  0.20   1.00   81
NATURAL FAIR COVER
"GRASS"              D      2.20  0.20   1.00   84
NATURAL FAIR COVER
"OPEN BRUSH"         D      0.60  0.20   1.00   83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 22.00 SUBAREA RUNOFF (CFS) = 53.11
EFFECTIVE AREA (ACRES) = 189.70 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 189.70 PEAK FLOW RATE (CFS) = 456.49

*****
FLOW PROCESS FROM NODE 1374.00 TO NODE 1375.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 280.00 DOWNSTREAM (FEET) = 265.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 457.00 CHANNEL SLOPE = 0.0328
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 456.49
FLOW VELOCITY (FEET/SEC.) = 11.72 FLOW DEPTH (FEET) = 4.22
TRAVEL TIME (MIN.) = 0.65 Tc (MIN.) = 19.23
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1375.00 = 7155.00 FEET.

*****
FLOW PROCESS FROM NODE 1374.00 TO NODE 1375.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 19.23
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.868
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              B      1.20   0.30   1.00   69

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NATURAL FAIR COVER
"OPEN BRUSH"         B      3.30   0.30   1.00   66
COMMERCIAL           B      0.50   0.30   0.10   56
NATURAL FAIR COVER
"WOODLAND"          B      2.80   0.30   1.00   60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C     12.40  0.25   1.00   75
NATURAL FAIR COVER
"GRASS"              C     43.70  0.25   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA (ACRES) = 63.90 SUBAREA RUNOFF (CFS) = 150.34
EFFECTIVE AREA (ACRES) = 253.60 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 253.60 PEAK FLOW RATE (CFS) = 597.07

*****
FLOW PROCESS FROM NODE 1374.00 TO NODE 1375.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 19.23
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.868
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"         C     28.50  0.25   1.00   77
COMMERCIAL           C      0.20  0.25   0.10   69
NATURAL FAIR COVER
"WOODLAND"          C     19.10  0.25   1.00   73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D      0.70  0.20   1.00   81
NATURAL FAIR COVER
"GRASS"              D     22.60  0.20   1.00   84
NATURAL FAIR COVER
"OPEN BRUSH"         D      0.90  0.20   1.00   83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 72.00 SUBAREA RUNOFF (CFS) = 170.78
EFFECTIVE AREA (ACRES) = 325.60 AREA-AVERAGED Fm (INCH/HR) = 0.25
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 325.60 PEAK FLOW RATE (CFS) = 767.85

*****
FLOW PROCESS FROM NODE 1375.00 TO NODE 1376.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 265.00 DOWNSTREAM (FEET) = 216.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1573.00 CHANNEL SLOPE = 0.0312
CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
CHANNEL FLOW THRU SUBAREA (CFS) = 767.85
FLOW VELOCITY (FEET/SEC.) = 13.10 FLOW DEPTH (FEET) = 5.22
TRAVEL TIME (MIN.) = 2.00 Tc (MIN.) = 21.23
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1376.00 = 8728.00 FEET.

*****
FLOW PROCESS FROM NODE 1375.00 TO NODE 1376.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 21.23
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.707
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
COMMERCIAL           B      1.00   0.30   0.10   56
NATURAL FAIR COVER
"WOODLAND"          B      1.30   0.30   1.00   60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      0.10  0.25   1.00   75
NATURAL FAIR COVER
"GRASS"              C      1.50  0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"         C      1.60  0.25   1.00   77
COMMERCIAL           C      1.10  0.25   0.10   69

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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.71
 SUBAREA AREA (ACRES) = 6.60 SUBAREA RUNOFF (CFS) = 14.96
 EFFECTIVE AREA (ACRES) = 332.20 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 332.20 PEAK FLOW RATE (CFS) = 767.85
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 1375.00 TO NODE 1376.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 21.23
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.707
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND" C 2.20 0.25 1.00 73
 PUBLIC PARK D 5.80 0.20 0.85 75
 NATURAL FAIR COVER
 "GRASS" D 0.40 0.20 1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH" D 12.00 0.20 1.00 83
 COMMERCIAL D 0.40 0.20 0.10 75
 NATURAL FAIR COVER
 "WOODLAND" D 1.10 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
 SUBAREA AREA (ACRES) = 21.90 SUBAREA RUNOFF (CFS) = 49.53
 EFFECTIVE AREA (ACRES) = 354.10 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 354.10 PEAK FLOW RATE (CFS) = 785.04

 FLOW PROCESS FROM NODE 1376.00 TO NODE 1376.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
 TIME OF CONCENTRATION (MIN.) = 21.23
 RAINFALL INTENSITY (INCH/HR) = 2.71
 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.25
 AREA-AVERAGED Ap = 0.99
 EFFECTIVE STREAM AREA (ACRES) = 354.10
 TOTAL STREAM AREA (ACRES) = 354.10
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 785.04

** CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp (Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	4695.64	31.98	2.145	0.25 (0.25)	0.98	2584.3	1340.00
1	4933.96	37.80	1.946	0.25 (0.25)	0.98	3052.5	1300.00
1	4842.86	39.08	1.908	0.25 (0.25)	0.98	3073.9	1320.00
2	785.04	21.23	2.707	0.25 (0.24)	0.99	354.1	1360.00

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp (Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	4824.72	21.23	2.707	0.25 (0.25)	0.98	2069.5	1360.00
2	5301.59	31.98	2.145	0.25 (0.25)	0.98	2938.4	1340.00
3	5476.58	37.80	1.946	0.25 (0.25)	0.98	3406.6	1300.00
4	5373.25	39.08	1.908	0.25 (0.25)	0.98	3428.0	1320.00

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE (CFS) = 5476.58 Tc (MIN.) = 37.80
 EFFECTIVE AREA (ACRES) = 3406.62 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 3428.00
 LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1376.00 = 19689.00 FEET.

FLOW PROCESS FROM NODE 1376.00 TO NODE 1394.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 216.00 DOWNSTREAM (FEET) = 214.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 60.00 CHANNEL SLOPE = 0.0333
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 5476.58
 FLOW VELOCITY (FEET/SEC.) = 18.63 FLOW DEPTH (FEET) = 3.21
 TRAVEL TIME (MIN.) = 0.05 Tc (MIN.) = 37.85
 LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1394.00 = 19749.00 FEET.

 FLOW PROCESS FROM NODE 1376.00 TO NODE 1394.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 37.85
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.944
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH" D 0.20 0.20 1.00 83
 PUBLIC PARK D 0.30 0.20 0.85 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.91
 SUBAREA AREA (ACRES) = 0.50 SUBAREA RUNOFF (CFS) = 0.79
 EFFECTIVE AREA (ACRES) = 3407.12 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 3428.50 PEAK FLOW RATE (CFS) = 5476.58
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 1394.00 TO NODE 1394.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<

TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 TIME OF CONCENTRATION (MIN.) = 37.85
 RAINFALL INTENSITY (INCH/HR) = 1.94
 AREA-AVERAGED Fm (INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25
 AREA-AVERAGED Ap = 0.98
 EFFECTIVE STREAM AREA (ACRES) = 3407.12
 TOTAL STREAM AREA (ACRES) = 3428.50
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 5476.58

 FLOW PROCESS FROM NODE 1380.00 TO NODE 1381.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<<<<

INITIAL SUBAREA FLOW-LENGTH (FEET) = 308.00
 ELEVATION DATA: UPSTREAM (FEET) = 761.00 DOWNSTREAM (FEET) = 650.00

Tc = K * [(LENGTH** 3.00) / (ELEVATION CHANGE)]** 0.20
 SUBAREA ANALYSIS USED MINIMUM Tc (MIN.) = 8.568
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.584
 SUBAREA Tc AND LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 NATURAL FAIR COVER
 "OPEN BRUSH" C 0.50 0.25 1.00 77 8.57
 NATURAL FAIR COVER
 "OPEN BRUSH" D 0.10 0.20 1.00 83 8.57
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF (CFS) = 2.34
 TOTAL AREA (ACRES) = 0.60 PEAK FLOW RATE (CFS) = 2.34

 FLOW PROCESS FROM NODE 1381.00 TO NODE 1382.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<


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>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 650.00 DOWNSTREAM(FEET) = 600.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 222.00 CHANNEL SLOPE = 0.2252
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 2.34
FLOW VELOCITY(FEET/SEC.) = 6.20 FLOW DEPTH(FEET) = 0.29
TRAVEL TIME(MIN.) = 0.60 Tc(MIN.) = 9.17
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1382.00 = 530.00 FEET.

*****
FLOW PROCESS FROM NODE 1381.00 TO NODE 1382.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 9.17
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.407
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 0.10 0.25 1.00 77
NATURAL FAIR COVER
"OPEN BRUSH" D 1.40 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 1.50 SUBAREA RUNOFF(CFS) = 5.68
EFFECTIVE AREA(ACRES) = 2.10 AREA-AVERAGED Fm(INCH/HR) = 0.21
AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 2.10 PEAK FLOW RATE(CFS) = 7.92

*****
FLOW PROCESS FROM NODE 1382.00 TO NODE 1383.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 600.00 DOWNSTREAM(FEET) = 588.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 77.00 CHANNEL SLOPE = 0.1558
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 7.92
FLOW VELOCITY(FEET/SEC.) = 7.58 FLOW DEPTH(FEET) = 0.64
TRAVEL TIME(MIN.) = 0.17 Tc(MIN.) = 9.33
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1383.00 = 607.00 FEET.

*****
FLOW PROCESS FROM NODE 1382.00 TO NODE 1383.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 9.33
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.357
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 1.60 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.10 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 0.50 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 2.20 SUBAREA RUNOFF(CFS) = 8.16
EFFECTIVE AREA(ACRES) = 4.30 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 4.30 PEAK FLOW RATE(CFS) = 15.99

*****
FLOW PROCESS FROM NODE 1383.00 TO NODE 1384.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 588.00 DOWNSTREAM(FEET) = 560.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 310.00 CHANNEL SLOPE = 0.0903
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000

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MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 15.99
FLOW VELOCITY(FEET/SEC.) = 7.25 FLOW DEPTH(FEET) = 0.79
TRAVEL TIME(MIN.) = 0.71 Tc(MIN.) = 10.05
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1384.00 = 917.00 FEET.

*****
FLOW PROCESS FROM NODE 1383.00 TO NODE 1384.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 10.05
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.151
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 2.00 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 1.10 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 1.00 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 4.10 SUBAREA RUNOFF(CFS) = 14.49
EFFECTIVE AREA(ACRES) = 8.40 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 8.40 PEAK FLOW RATE(CFS) = 29.68

*****
FLOW PROCESS FROM NODE 1384.00 TO NODE 1385.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 560.00 DOWNSTREAM(FEET) = 530.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 488.00 CHANNEL SLOPE = 0.0615
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 29.68
FLOW VELOCITY(FEET/SEC.) = 7.44 FLOW DEPTH(FEET) = 1.23
TRAVEL TIME(MIN.) = 1.09 Tc(MIN.) = 11.14
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1385.00 = 1405.00 FEET.

*****
FLOW PROCESS FROM NODE 1384.00 TO NODE 1385.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 11.14
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.932
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 1.00 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 4.10 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 1.90 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 1.40 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 8.40 SUBAREA RUNOFF(CFS) = 27.98
EFFECTIVE AREA(ACRES) = 16.80 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 16.80 PEAK FLOW RATE(CFS) = 56.01

*****
FLOW PROCESS FROM NODE 1385.00 TO NODE 1386.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 530.00 DOWNSTREAM(FEET) = 485.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 584.00 CHANNEL SLOPE = 0.0771
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00

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CHANNEL FLOW THRU SUBAREA(CFS) = 56.01
FLOW VELOCITY(FEET/SEC.) = 9.55 FLOW DEPTH(FEET) = 1.62
TRAVEL TIME(MIN.) = 1.02 Tc(MIN.) = 12.16
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1386.00 = 1989.00 FEET.

FLOW PROCESS FROM NODE 1385.00 TO NODE 1386.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 12.16
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.728
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.10 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.90 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 3.00 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 2.00 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 6.00 SUBAREA RUNOFF(CFS) = 19.01
EFFECTIVE AREA(ACRES) = 22.80 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 22.80 PEAK FLOW RATE(CFS) = 71.93

FLOW PROCESS FROM NODE 1386.00 TO NODE 1387.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 485.00 DOWNSTREAM(FEET) = 460.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 549.00 CHANNEL SLOPE = 0.0455
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 71.93
FLOW VELOCITY(FEET/SEC.) = 8.29 FLOW DEPTH(FEET) = 1.81
TRAVEL TIME(MIN.) = 1.10 Tc(MIN.) = 13.26
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1387.00 = 2538.00 FEET.

FLOW PROCESS FROM NODE 1386.00 TO NODE 1387.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 13.26
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.550
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.90 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 4.70 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 5.90 0.20 1.00 81
NATURAL FAIR COVER
"GRASS" D 0.60 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 3.50 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 15.60 SUBAREA RUNOFF(CFS) = 46.78
EFFECTIVE AREA(ACRES) = 38.40 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 38.40 PEAK FLOW RATE(CFS) = 115.07

FLOW PROCESS FROM NODE 1387.00 TO NODE 1388.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 460.00 DOWNSTREAM(FEET) = 455.00

CHANNEL LENGTH THRU SUBAREA(FEET) = 140.00 CHANNEL SLOPE = 0.0357
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 115.07
FLOW VELOCITY(FEET/SEC.) = 8.57 FLOW DEPTH(FEET) = 2.46
TRAVEL TIME(MIN.) = 0.27 Tc(MIN.) = 13.53
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1388.00 = 2678.00 FEET.

FLOW PROCESS FROM NODE 1387.00 TO NODE 1388.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 13.53
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.511
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.90 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 7.50 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 6.60 0.20 1.00 81
NATURAL FAIR COVER
"GRASS" D 2.00 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 15.50 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 32.90 SUBAREA RUNOFF(CFS) = 97.64
EFFECTIVE AREA(ACRES) = 71.30 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 71.30 PEAK FLOW RATE(CFS) = 211.35

FLOW PROCESS FROM NODE 1388.00 TO NODE 1389.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 455.00 DOWNSTREAM(FEET) = 420.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1360.00 CHANNEL SLOPE = 0.0257
CHANNEL BASE(FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 4.00
CHANNEL FLOW THRU SUBAREA(CFS) = 211.35
FLOW VELOCITY(FEET/SEC.) = 8.83 FLOW DEPTH(FEET) = 3.29
TRAVEL TIME(MIN.) = 2.57 Tc(MIN.) = 16.10
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1389.00 = 4038.00 FEET.

FLOW PROCESS FROM NODE 1388.00 TO NODE 1389.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 16.10
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.177
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 2.50 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 0.60 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 3.60 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 10.20 0.20 1.00 81
NATURAL POOR COVER
"BARREN" D 2.20 0.20 1.00 93
NATURAL FAIR COVER
"GRASS" D 7.80 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 26.90 SUBAREA RUNOFF(CFS) = 71.76
EFFECTIVE AREA(ACRES) = 98.20 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00

```

TOTAL AREA (ACRES) = 98.20 PEAK FLOW RATE (CFS) = 261.66
*****
FLOW PROCESS FROM NODE 1388.00 TO NODE 1389.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 16.10
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.177
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL FAIR COVER
"ORCHARDS" D 6.90 0.20 1.00 82
NATURAL FAIR COVER
"OPEN BRUSH" D 1.90 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 4.20 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 13.00 SUBAREA RUNOFF (CFS) = 34.83
EFFECTIVE AREA (ACRES) = 111.20 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 111.20 PEAK FLOW RATE (CFS) = 296.48
*****
FLOW PROCESS FROM NODE 1389.00 TO NODE 1390.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 420.00 DOWNSTREAM (FEET) = 390.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1047.00 CHANNEL SLOPE = 0.0287
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 296.48
FLOW VELOCITY (FEET/SEC.) = 10.02 FLOW DEPTH (FEET) = 3.80
TRAVEL TIME (MIN.) = 1.74 Tc (MIN.) = 17.84
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1390.00 = 5085.00 FEET.
*****
FLOW PROCESS FROM NODE 1389.00 TO NODE 1390.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 17.84
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.990
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL POOR COVER
"BARREN" C 0.20 0.25 1.00 91
NATURAL FAIR COVER
"GRASS" C 5.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 6.60 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 0.90 0.25 1.00 73
NATURAL POOR COVER
"BARREN" D 3.10 0.20 1.00 93
NATURAL FAIR COVER
"GRASS" D 13.90 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 30.10 SUBAREA RUNOFF (CFS) = 74.98
EFFECTIVE AREA (ACRES) = 141.30 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 141.30 PEAK FLOW RATE (CFS) = 352.77
*****
FLOW PROCESS FROM NODE 1389.00 TO NODE 1390.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 17.84
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.990
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN

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AGRICULTURAL FAIR COVER
"ORCHARDS" D 8.90 0.20 1.00 82
NATURAL FAIR COVER
"OPEN BRUSH" D 1.70 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 5.30 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 15.90 SUBAREA RUNOFF (CFS) = 39.92
EFFECTIVE AREA (ACRES) = 157.20 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 157.20 PEAK FLOW RATE (CFS) = 392.69
*****
FLOW PROCESS FROM NODE 1390.00 TO NODE 1391.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 390.00 DOWNSTREAM (FEET) = 323.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1978.00 CHANNEL SLOPE = 0.0339
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 392.69
FLOW VELOCITY (FEET/SEC.) = 11.40 FLOW DEPTH (FEET) = 3.88
TRAVEL TIME (MIN.) = 2.89 Tc (MIN.) = 20.74
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1391.00 = 7063.00 FEET.
*****
FLOW PROCESS FROM NODE 1390.00 TO NODE 1391.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 20.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.744
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" B 0.30 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 0.40 0.30 1.00 66
RESIDENTIAL
"5-7 DWELLINGS/ACRE" C 3.40 0.25 0.50 69
NATURAL FAIR COVER
"GRASS" C 4.70 0.25 1.00 79
AGRICULTURAL FAIR COVER
"ORCHARDS" C 7.30 0.25 1.00 77
NATURAL FAIR COVER
"OPEN BRUSH" C 7.40 0.25 1.00 77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
SUBAREA AREA (ACRES) = 23.50 SUBAREA RUNOFF (CFS) = 53.10
EFFECTIVE AREA (ACRES) = 180.70 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.99
TOTAL AREA (ACRES) = 180.70 PEAK FLOW RATE (CFS) = 411.04
*****
FLOW PROCESS FROM NODE 1390.00 TO NODE 1391.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 20.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.744
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
PUBLIC PARK C 0.40 0.25 0.85 69
NATURAL FAIR COVER
"WOODLAND" C 1.60 0.25 1.00 73
RESIDENTIAL
"5-7 DWELLINGS/ACRE" D 6.60 0.20 0.50 75
NATURAL POOR COVER
"BARREN" D 6.10 0.20 1.00 93
NATURAL FAIR COVER
"GRASS" D 8.40 0.20 1.00 84
AGRICULTURAL FAIR COVER
"ORCHARDS" D 13.10 0.20 1.00 82
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20

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SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.91
 SUBAREA AREA (ACRES) = 36.20 SUBAREA RUNOFF (CFS) = 83.41
 EFFECTIVE AREA (ACRES) = 216.90 AREA-AVERAGED Fm (INCH/HR) = 0.21
 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 216.90 PEAK FLOW RATE (CFS) = 494.45

 FLOW PROCESS FROM NODE 1390.00 TO NODE 1391.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 20.74
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.744
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH" D 8.00 0.20 1.00 83
 PUBLIC PARK D 1.30 0.20 0.85 75
 NATURAL FAIR COVER
 "WOODLAND" D 12.00 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA (ACRES) = 21.30 SUBAREA RUNOFF (CFS) = 48.81
 EFFECTIVE AREA (ACRES) = 238.20 AREA-AVERAGED Fm (INCH/HR) = 0.21
 AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 238.20 PEAK FLOW RATE (CFS) = 543.25

 FLOW PROCESS FROM NODE 1391.00 TO NODE 1392.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 323.00 DOWNSTREAM (FEET) = 290.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1595.00 CHANNEL SLOPE = 0.0207
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 543.25
 FLOW VELOCITY (FEET/SEC.) = 10.28 FLOW DEPTH (FEET) = 4.86
 TRAVEL TIME (MIN.) = 2.58 Tc (MIN.) = 23.32
 LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1392.00 = 8658.00 FEET.

 FLOW PROCESS FROM NODE 1391.00 TO NODE 1392.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 23.32
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.561
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" A 0.40 0.40 0.50 32
 NATURAL POOR COVER
 "BARREN" A 0.10 0.40 1.00 78
 NATURAL FAIR COVER
 "GRASS" A 0.10 0.40 1.00 50
 NATURAL FAIR COVER
 "OPEN BRUSH" A 0.20 0.40 1.00 46
 NATURAL FAIR COVER
 "WOODLAND" A 2.20 0.40 1.00 36
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" B 1.70 0.30 0.50 56
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.38
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.78
 SUBAREA AREA (ACRES) = 4.70 SUBAREA RUNOFF (CFS) = 9.59
 EFFECTIVE AREA (ACRES) = 242.90 AREA-AVERAGED Fm (INCH/HR) = 0.21
 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 242.90 PEAK FLOW RATE (CFS) = 543.25
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 1391.00 TO NODE 1392.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 23.32

* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.561
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS" B 1.70 0.30 1.00 69
 AGRICULTURAL FAIR COVER
 "ORCHARDS" B 5.30 0.30 1.00 65
 NATURAL FAIR COVER
 "OPEN BRUSH" B 0.30 0.30 1.00 66
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" C 2.50 0.25 0.50 69
 AGRICULTURAL FAIR COVER
 "ORCHARDS" C 0.60 0.25 1.00 77
 NATURAL FAIR COVER
 "OPEN BRUSH" C 3.00 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.91
 SUBAREA AREA (ACRES) = 13.40 SUBAREA RUNOFF (CFS) = 27.82
 EFFECTIVE AREA (ACRES) = 256.30 AREA-AVERAGED Fm (INCH/HR) = 0.21
 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 256.30 PEAK FLOW RATE (CFS) = 543.25
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 1391.00 TO NODE 1392.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 23.32
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.561
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 PUBLIC PARK C 0.40 0.25 0.85 69
 NATURAL FAIR COVER
 "WOODLAND" C 1.70 0.25 1.00 73
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 1.10 0.20 0.50 75
 NATURAL FAIR COVER
 "GRASS" D 0.10 0.20 1.00 84
 AGRICULTURAL FAIR COVER
 "ORCHARDS" D 14.70 0.20 1.00 82
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.97
 SUBAREA AREA (ACRES) = 18.00 SUBAREA RUNOFF (CFS) = 38.26
 EFFECTIVE AREA (ACRES) = 274.30 AREA-AVERAGED Fm (INCH/HR) = 0.21
 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 274.30 PEAK FLOW RATE (CFS) = 579.63

 FLOW PROCESS FROM NODE 1392.00 TO NODE 1393.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 290.00 DOWNSTREAM (FEET) = 265.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1049.00 CHANNEL SLOPE = 0.0238
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 579.63
 FLOW VELOCITY (FEET/SEC.) = 11.02 FLOW DEPTH (FEET) = 4.85
 TRAVEL TIME (MIN.) = 1.59 Tc (MIN.) = 24.91
 LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1393.00 = 9707.00 FEET.

 FLOW PROCESS FROM NODE 1392.00 TO NODE 1393.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 24.91
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.466
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS" A 0.40 0.40 1.00 50
 NATURAL FAIR COVER
 "OPEN BRUSH" A 1.40 0.40 1.00 46

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NATURAL FAIR COVER
"WOODLAND"      A      0.60  0.40  1.00  36
RESIDENTIAL
"5-7 DWELLINGS/ACRE" B      0.10  0.30  0.50  56
NATURAL FAIR COVER
"OPEN BRUSH"    C      0.50  0.25  1.00  77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.37
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
SUBAREA AREA (ACRES) = 3.00 SUBAREA RUNOFF (CFS) = 5.67
EFFECTIVE AREA (ACRES) = 277.30 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 277.30 PEAK FLOW RATE (CFS) = 579.63
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1393.00 TO NODE 1394.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 265.00 DOWNSTREAM (FEET) = 214.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1585.00 CHANNEL SLOPE = 0.0322
CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
CHANNEL FLOW THRU SUBAREA (CFS) = 579.63
FLOW VELOCITY (FEET/SEC.) = 12.33 FLOW DEPTH (FEET) = 4.48
TRAVEL TIME (MIN.) = 2.14 Tc (MIN.) = 27.05
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1394.00 = 11292.00 FEET.

*****
FLOW PROCESS FROM NODE 1393.00 TO NODE 1394.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 27.05
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.354
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
PUBLIC PARK A 1.60 0.40 0.85 32
NATURAL POOR COVER
"BARREN" A 3.20 0.40 1.00 78
NATURAL FAIR COVER
"GRASS" A 4.90 0.40 1.00 50
NATURAL FAIR COVER
"OPEN BRUSH" A 0.40 0.40 1.00 46
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" A 0.80 0.40 1.00 40
NATURAL FAIR COVER
"WOODLAND" A 1.90 0.40 1.00 36
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.40
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
SUBAREA AREA (ACRES) = 12.80 SUBAREA RUNOFF (CFS) = 22.59
EFFECTIVE AREA (ACRES) = 290.10 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 290.10 PEAK FLOW RATE (CFS) = 579.63
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1393.00 TO NODE 1394.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 27.05
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.354
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" B 2.90 0.30 0.50 56
NATURAL FAIR COVER
"WOODLAND" B 0.20 0.30 1.00 60
RESIDENTIAL
"5-7 DWELLINGS/ACRE" C 0.80 0.25 0.50 69
NATURAL FAIR COVER
"GRASS" C 1.30 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 2.20 0.25 1.00 77
NATURAL FAIR COVER

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"WOODLAND" C 0.10 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.75
SUBAREA AREA (ACRES) = 7.50 SUBAREA RUNOFF (CFS) = 14.54
EFFECTIVE AREA (ACRES) = 297.60 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 297.60 PEAK FLOW RATE (CFS) = 579.63
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1393.00 TO NODE 1394.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 27.05
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.354
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL FAIR COVER
"ORCHARDS" D 0.10 0.20 1.00 82
PUBLIC PARK D 0.20 0.20 0.85 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.90
SUBAREA AREA (ACRES) = 0.30 SUBAREA RUNOFF (CFS) = 0.59
EFFECTIVE AREA (ACRES) = 297.90 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 297.90 PEAK FLOW RATE (CFS) = 579.63
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1394.00 IS CODE = 1
-----
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<
-----
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
TIME OF CONCENTRATION (MIN.) = 27.05
RAINFALL INTENSITY (INCH/HR) = 2.35
AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.23
AREA-AVERAGED Ap = 0.97
EFFECTIVE STREAM AREA (ACRES) = 297.90
TOTAL STREAM AREA (ACRES) = 297.90
PEAK FLOW RATE (CFS) AT CONFLUENCE = 579.63

** CONFLUENCE DATA **
STREAM Q Tc Intensity Fp(Fm) Ap Ae HEADWATER
NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1 4824.72 21.28 2.702 0.25(0.25) 0.98 2070.0 1360.00
1 5301.59 32.03 2.143 0.25(0.25) 0.98 2938.9 1340.00
1 5476.58 37.85 1.944 0.25(0.25) 0.98 3407.1 1300.00
1 5373.25 39.13 1.906 0.25(0.25) 0.98 3428.5 1320.00
2 579.63 27.05 2.354 0.23(0.22) 0.97 297.9 1380.00

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

** PEAK FLOW RATE TABLE **
STREAM Q Tc Intensity Fp(Fm) Ap Ae HEADWATER
NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1 5355.48 21.28 2.702 0.25(0.24) 0.98 2304.4 1360.00
2 5660.05 27.05 2.354 0.25(0.24) 0.98 2833.8 1380.00
3 5823.90 32.03 2.143 0.25(0.24) 0.98 3236.8 1340.00
4 5945.00 37.85 1.944 0.25(0.24) 0.98 3705.0 1300.00
5 5831.22 39.13 1.906 0.25(0.24) 0.98 3726.4 1320.00

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE (CFS) = 5945.00 Tc (MIN.) = 37.85
EFFECTIVE AREA (ACRES) = 3705.02 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA (ACRES) = 3726.40
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1394.00 = 19749.00 FEET.

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1066.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<

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>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM( FEET) = 214.00 DOWNSTREAM( FEET) = 213.00
CHANNEL LENGTH THRU SUBAREA( FEET) = 3053.00 CHANNEL SLOPE = 0.0003
CHANNEL BASE( FEET) = 85.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.030 MAXIMUM DEPTH( FEET) = 15.00
CHANNEL FLOW THRU SUBAREA( CFS) = 5945.00
FLOW VELOCITY( FEET/SEC.) = 4.16 FLOW DEPTH( FEET) = 12.89
TRAVEL TIME( MIN.) = 12.22 Tc( MIN.) = 50.07
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1066.00 = 22802.00 FEET.

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1066.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc( MIN) = 50.07
* 100 YEAR RAINFALL INTENSITY( INCH/HR) = 1.649
SUBAREA LOSS RATE DATA( AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
PUBLIC PARK A 8.80 0.40 0.85 32
NATURAL FAIR COVER
"GRASS" A 22.60 0.40 1.00 50
NATURAL FAIR COVER
"OPEN BRUSH" A 1.80 0.40 1.00 46
NATURAL FAIR COVER
"WOODLAND" A 4.90 0.40 1.00 36
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" B 0.20 0.30 1.00 63
RESIDENTIAL
"5-7 DWELLINGS/ACRE" B 1.80 0.30 0.50 56
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp( INCH/HR) = 0.40
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
SUBAREA AREA( ACRES) = 40.10 SUBAREA RUNOFF( CFS) = 45.97
EFFECTIVE AREA( ACRES) = 3745.12 AREA-AVERAGED Fm( INCH/HR) = 0.25
AREA-AVERAGED Fp( INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA( ACRES) = 3766.50 PEAK FLOW RATE( CFS) = 5945.00
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1066.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc( MIN) = 50.07
* 100 YEAR RAINFALL INTENSITY( INCH/HR) = 1.649
SUBAREA LOSS RATE DATA( AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL POOR COVER
"BARREN" B 0.20 0.30 1.00 86
NATURAL FAIR COVER
"GRASS" B 7.50 0.30 1.00 69
AGRICULTURAL FAIR COVER
"ORCHARDS" B 14.60 0.30 1.00 65
NATURAL FAIR COVER
"OPEN BRUSH" B 5.30 0.30 1.00 66
COMMERCIAL B 0.70 0.30 0.10 56
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" B 1.60 0.30 1.00 69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp( INCH/HR) = 0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
SUBAREA AREA( ACRES) = 29.90 SUBAREA RUNOFF( CFS) = 36.47
EFFECTIVE AREA( ACRES) = 3775.02 AREA-AVERAGED Fm( INCH/HR) = 0.25
AREA-AVERAGED Fp( INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA( ACRES) = 3796.40 PEAK FLOW RATE( CFS) = 5945.00
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1066.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc( MIN) = 50.07
* 100 YEAR RAINFALL INTENSITY( INCH/HR) = 1.649
SUBAREA LOSS RATE DATA( AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN

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PUBLIC PARK B 0.40 0.30 0.85 56
NATURAL FAIR COVER
"WOODLAND" B 6.50 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C 8.10 0.25 1.00 75
RESIDENTIAL
"5-7 DWELLINGS/ACRE" C 0.30 0.25 0.50 69
NATURAL POOR COVER
"BARREN" C 4.80 0.25 1.00 91
NATURAL FAIR COVER
"GRASS" C 32.00 0.25 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp( INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA( ACRES) = 52.10 SUBAREA RUNOFF( CFS) = 65.33
EFFECTIVE AREA( ACRES) = 3827.12 AREA-AVERAGED Fm( INCH/HR) = 0.25
AREA-AVERAGED Fp( INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA( ACRES) = 3848.50 PEAK FLOW RATE( CFS) = 5945.00
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1066.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc( MIN) = 50.07
* 100 YEAR RAINFALL INTENSITY( INCH/HR) = 1.649
SUBAREA LOSS RATE DATA( AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL FAIR COVER
"ORCHARDS" C 2.20 0.25 1.00 77
NATURAL FAIR COVER
"OPEN BRUSH" C 7.80 0.25 1.00 77
COMMERCIAL C 2.20 0.25 0.10 69
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" C 0.90 0.25 1.00 79
NATURAL FAIR COVER
"WOODLAND" C 13.50 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 5.60 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp( INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
SUBAREA AREA( ACRES) = 32.20 SUBAREA RUNOFF( CFS) = 41.24
EFFECTIVE AREA( ACRES) = 3859.32 AREA-AVERAGED Fm( INCH/HR) = 0.25
AREA-AVERAGED Fp( INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA( ACRES) = 3880.70 PEAK FLOW RATE( CFS) = 5945.00
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1066.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc( MIN) = 50.07
* 100 YEAR RAINFALL INTENSITY( INCH/HR) = 1.649
SUBAREA LOSS RATE DATA( AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL FAIR COVER
"ORCHARDS" D 20.00 0.20 1.00 82
NATURAL FAIR COVER
"OPEN BRUSH" D 14.50 0.20 1.00 83
PUBLIC PARK D 16.00 0.20 0.85 75
NATURAL GOOD COVER
"MEADOWS" D 1.60 0.20 1.00 78
NATURAL FAIR COVER
"WOODLAND" D 6.50 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp( INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96
SUBAREA AREA( ACRES) = 58.60 SUBAREA RUNOFF( CFS) = 76.84
EFFECTIVE AREA( ACRES) = 3917.92 AREA-AVERAGED Fm( INCH/HR) = 0.25
AREA-AVERAGED Fp( INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
TOTAL AREA( ACRES) = 3939.30 PEAK FLOW RATE( CFS) = 5945.00
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
END OF STUDY SUMMARY:
TOTAL AREA( ACRES) = 3939.30 TC( MIN.) = 50.07
EFFECTIVE AREA( ACRES) = 3917.92 AREA-AVERAGED Fm( INCH/HR) = 0.25
AREA-AVERAGED Fp( INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98

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PEAK FLOW RATE(CFS) = 5945.00

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	5355.48	33.91	2.071	0.25(0.25)	0.98	2517.3	1360.00
2	5660.05	39.46	1.896	0.25(0.24)	0.98	3046.7	1380.00
3	5823.90	44.33	1.780	0.25(0.25)	0.98	3449.7	1340.00
4	5945.00	50.07	1.649	0.25(0.25)	0.98	3917.9	1300.00
5	5831.22	51.43	1.627	0.25(0.25)	0.98	3939.3	1320.00

=====
END OF RATIONAL METHOD ANALYSIS
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*****
FLOW PROCESS FROM NODE 1403.00 TO NODE 1404.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 925.00 DOWNSTREAM(FEET) = 900.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 83.00 CHANNEL SLOPE = 0.3012
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 3.37
FLOW VELOCITY(FEET/SEC.) = 7.61 FLOW DEPTH(FEET) = 0.33
TRAVEL TIME(MIN.) = 0.18 Tc(MIN.) = 16.84
LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1404.00 = 882.00 FEET.

*****
FLOW PROCESS FROM NODE 1403.00 TO NODE 1404.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 16.84
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.094
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.30 0.25 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 0.30 SUBAREA RUNOFF(CFS) = 0.77
EFFECTIVE AREA(ACRES) = 1.60 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 1.60 PEAK FLOW RATE(CFS) = 4.12

*****
FLOW PROCESS FROM NODE 1404.00 TO NODE 1405.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 900.00 DOWNSTREAM(FEET) = 875.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 113.00 CHANNEL SLOPE = 0.2212
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 4.12
FLOW VELOCITY(FEET/SEC.) = 7.19 FLOW DEPTH(FEET) = 0.41
TRAVEL TIME(MIN.) = 0.26 Tc(MIN.) = 17.10
LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1405.00 = 995.00 FEET.

*****
FLOW PROCESS FROM NODE 1404.00 TO NODE 1405.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 17.10
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.065
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 2.50 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.70 0.25 1.00 77
NATURAL FAIR COVER
"GRASS" D 0.20 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 3.40 SUBAREA RUNOFF(CFS) = 8.62
EFFECTIVE AREA(ACRES) = 5.00 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 5.00 PEAK FLOW RATE(CFS) = 12.70

*****
FLOW PROCESS FROM NODE 1405.00 TO NODE 1406.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----

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ELEVATION DATA: UPSTREAM(FEET) = 875.00 DOWNSTREAM(FEET) = 800.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 331.00 CHANNEL SLOPE = 0.2266
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 12.70
FLOW VELOCITY(FEET/SEC.) = 9.81 FLOW DEPTH(FEET) = 0.74
TRAVEL TIME(MIN.) = 0.56 Tc(MIN.) = 17.66
LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1406.00 = 1326.00 FEET.

*****
FLOW PROCESS FROM NODE 1405.00 TO NODE 1406.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 17.66
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.006
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 1.20 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.60 0.25 1.00 77
NATURAL FAIR COVER
"GRASS" D 0.70 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 0.40 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 2.90 SUBAREA RUNOFF(CFS) = 7.24
EFFECTIVE AREA(ACRES) = 7.90 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 7.90 PEAK FLOW RATE(CFS) = 19.67

*****
FLOW PROCESS FROM NODE 1406.00 TO NODE 1407.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 800.00 DOWNSTREAM(FEET) = 725.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 360.00 CHANNEL SLOPE = 0.2083
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 19.67
FLOW VELOCITY(FEET/SEC.) = 10.73 FLOW DEPTH(FEET) = 0.94
TRAVEL TIME(MIN.) = 0.56 Tc(MIN.) = 18.22
LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1407.00 = 1686.00 FEET.

*****
FLOW PROCESS FROM NODE 1406.00 TO NODE 1407.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 18.22
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.956
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 3.00 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 2.20 0.25 1.00 77
NATURAL FAIR COVER
"GRASS" D 1.80 0.20 1.00 84
NATURAL FAIR COVER
"WOODLAND" D 0.10 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 7.10 SUBAREA RUNOFF(CFS) = 17.38
EFFECTIVE AREA(ACRES) = 15.00 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 15.00 PEAK FLOW RATE(CFS) = 36.70

*****
FLOW PROCESS FROM NODE 1407.00 TO NODE 1408.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
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=====
ELEVATION DATA: UPSTREAM(FEET) = 725.00 DOWNSTREAM(FEET) = 675.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 205.00 CHANNEL SLOPE = 0.2439
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 36.70
FLOW VELOCITY(FEET/SEC.) = 13.08 FLOW DEPTH(FEET) = 0.95
TRAVEL TIME(MIN.) = 0.26 Tc(MIN.) = 18.48
LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1408.00 = 1891.00 FEET.

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*****
FLOW PROCESS FROM NODE 1407.00 TO NODE 1408.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 18.48
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.933
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              C         0.80   0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"        C         0.40   0.25   1.00   77
NATURAL FAIR COVER
"GRASS"              D         1.10   0.20   1.00   84
NATURAL FAIR COVER
"OPEN BRUSH"        D         0.10   0.20   1.00   83
NATURAL FAIR COVER
"WOODLAND"          D         0.30   0.20   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 2.70 SUBAREA RUNOFF(CFS) = 6.59
EFFECTIVE AREA(ACRES) = 17.70 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 17.70 PEAK FLOW RATE(CFS) = 42.98

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*****
FLOW PROCESS FROM NODE 1408.00 TO NODE 1409.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----

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```

ELEVATION DATA: UPSTREAM(FEET) = 675.00 DOWNSTREAM(FEET) = 655.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 81.00 CHANNEL SLOPE = 0.2469
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 42.98
FLOW VELOCITY(FEET/SEC.) = 13.69 FLOW DEPTH(FEET) = 1.03
TRAVEL TIME(MIN.) = 0.10 Tc(MIN.) = 18.58
LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1409.00 = 1972.00 FEET.

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*****
FLOW PROCESS FROM NODE 1408.00 TO NODE 1409.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 18.58
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.925
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              C         5.00   0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"        C         0.20   0.25   1.00   77
NATURAL FAIR COVER
"GRASS"              D         8.90   0.20   1.00   84
NATURAL FAIR COVER
"OPEN BRUSH"        D         0.20   0.20   1.00   83
NATURAL FAIR COVER
"WOODLAND"          D         1.30   0.20   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 15.60 SUBAREA RUNOFF(CFS) = 38.02
EFFECTIVE AREA(ACRES) = 33.30 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 33.30 PEAK FLOW RATE(CFS) = 80.86

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*****
FLOW PROCESS FROM NODE 1409.00 TO NODE 1410.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----

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```

ELEVATION DATA: UPSTREAM(FEET) = 655.00 DOWNSTREAM(FEET) = 595.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 303.00 CHANNEL SLOPE = 0.1980
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 80.86
FLOW VELOCITY(FEET/SEC.) = 14.88 FLOW DEPTH(FEET) = 1.54
TRAVEL TIME(MIN.) = 0.34 Tc(MIN.) = 18.92
LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1410.00 = 2275.00 FEET.

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*****
FLOW PROCESS FROM NODE 1409.00 TO NODE 1410.00 IS CODE = 81
-----

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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 18.92
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.895
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              C         0.70   0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"        C         1.30   0.25   1.00   77
NATURAL FAIR COVER
"WOODLAND"          C         1.10   0.25   1.00   73
NATURAL FAIR COVER
"GRASS"              D         5.40   0.20   1.00   84
NATURAL FAIR COVER
"OPEN BRUSH"        D         0.80   0.20   1.00   83
NATURAL FAIR COVER
"WOODLAND"          D         1.80   0.20   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 11.10 SUBAREA RUNOFF(CFS) = 26.78
EFFECTIVE AREA(ACRES) = 44.40 AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 44.40 PEAK FLOW RATE(CFS) = 106.75

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*****
FLOW PROCESS FROM NODE 1410.00 TO NODE 1411.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
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ELEVATION DATA: UPSTREAM(FEET) = 595.00 DOWNSTREAM(FEET) = 570.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 561.00 CHANNEL SLOPE = 0.0446
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 106.75
FLOW VELOCITY(FEET/SEC.) = 9.14 FLOW DEPTH(FEET) = 2.23
TRAVEL TIME(MIN.) = 1.02 Tc(MIN.) = 19.95
LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1411.00 = 2836.00 FEET.

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*****
FLOW PROCESS FROM NODE 1410.00 TO NODE 1411.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 19.95
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.805
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C         0.10   0.25   1.00   75
NATURAL FAIR COVER
"GRASS"              C         1.40   0.25   1.00   79
NATURAL FAIR COVER
"OPEN BRUSH"        C         2.70   0.25   1.00   77
NATURAL FAIR COVER
"WOODLAND"          C         4.60   0.25   1.00   73
NATURAL FAIR COVER
"GRASS"              D        15.40   0.20   1.00   84

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EFFECTIVE AREA (ACRES) = 1.90 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 1.90 PEAK FLOW RATE (CFS) = 6.54

FLOW PROCESS FROM NODE 1503.00 TO NODE 1504.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 1000.00 DOWNSTREAM (FEET) = 950.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 122.00 CHANNEL SLOPE = 0.4098
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 6.54
FLOW VELOCITY (FEET/SEC.) = 10.34 FLOW DEPTH (FEET) = 0.44
TRAVEL TIME (MIN.) = 0.20 Tc (MIN.) = 10.73
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1504.00 = 634.00 FEET.

FLOW PROCESS FROM NODE 1503.00 TO NODE 1504.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 10.73
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.014
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.10 0.25 1.00 77
NATURAL FAIR COVER
"GRASS" D 0.60 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.10 SUBAREA RUNOFF (CFS) = 3.75
EFFECTIVE AREA (ACRES) = 3.00 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 3.00 PEAK FLOW RATE (CFS) = 10.23

FLOW PROCESS FROM NODE 1504.00 TO NODE 1505.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 950.00 DOWNSTREAM (FEET) = 875.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 205.00 CHANNEL SLOPE = 0.3659
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 10.23
FLOW VELOCITY (FEET/SEC.) = 11.09 FLOW DEPTH (FEET) = 0.58
TRAVEL TIME (MIN.) = 0.31 Tc (MIN.) = 11.04
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1505.00 = 839.00 FEET.

FLOW PROCESS FROM NODE 1504.00 TO NODE 1505.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 11.04
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.952
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.50 0.25 1.00 77
NATURAL FAIR COVER
"GRASS" D 0.30 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.20 SUBAREA RUNOFF (CFS) = 4.01
EFFECTIVE AREA (ACRES) = 4.20 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 4.20 PEAK FLOW RATE (CFS) = 14.08

FLOW PROCESS FROM NODE 1505.00 TO NODE 1506.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 875.00 DOWNSTREAM (FEET) = 850.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 146.00 CHANNEL SLOPE = 0.1712
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 14.08
FLOW VELOCITY (FEET/SEC.) = 9.16 FLOW DEPTH (FEET) = 0.84
TRAVEL TIME (MIN.) = 0.27 Tc (MIN.) = 11.30
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1506.00 = 985.00 FEET.

FLOW PROCESS FROM NODE 1505.00 TO NODE 1506.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 11.30
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.899
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 1.30 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 1.20 0.25 1.00 77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.50 SUBAREA RUNOFF (CFS) = 8.21
EFFECTIVE AREA (ACRES) = 6.70 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 6.70 PEAK FLOW RATE (CFS) = 22.09

FLOW PROCESS FROM NODE 1506.00 TO NODE 1507.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM (FEET) = 850.00 DOWNSTREAM (FEET) = 835.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 129.00 CHANNEL SLOPE = 0.1163
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 22.09
FLOW VELOCITY (FEET/SEC.) = 8.69 FLOW DEPTH (FEET) = 0.88
TRAVEL TIME (MIN.) = 0.25 Tc (MIN.) = 11.55
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1507.00 = 1114.00 FEET.

FLOW PROCESS FROM NODE 1506.00 TO NODE 1507.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc (MIN) = 11.55
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.850
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 3.10 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 4.60 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 0.50 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 8.20 SUBAREA RUNOFF (CFS) = 26.57
EFFECTIVE AREA (ACRES) = 14.90 AREA-AVERAGED Fm (INCH/HR) = 0.24
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 14.90 PEAK FLOW RATE (CFS) = 48.35

FLOW PROCESS FROM NODE 1507.00 TO NODE 1508.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<

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>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 835.00 DOWNSTREAM(FEET) = 625.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 654.00 CHANNEL SLOPE = 0.3211
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 48.35
FLOW VELOCITY(FEET/SEC.) = 15.55 FLOW DEPTH(FEET) = 1.03
TRAVEL TIME(MIN.) = 0.70 Tc(MIN.) = 12.25
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1508.00 = 1768.00 FEET.

*****
FLOW PROCESS FROM NODE 1507.00 TO NODE 1508.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 12.25
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.709
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 1.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.40 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 1.30 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 3.10 SUBAREA RUNOFF(CFS) = 9.65
EFFECTIVE AREA(ACRES) = 18.00 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 18.00 PEAK FLOW RATE(CFS) = 56.12

*****
FLOW PROCESS FROM NODE 1508.00 TO NODE 1509.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 625.00 DOWNSTREAM(FEET) = 610.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 87.00 CHANNEL SLOPE = 0.1724
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 56.12
FLOW VELOCITY(FEET/SEC.) = 12.87 FLOW DEPTH(FEET) = 1.32
TRAVEL TIME(MIN.) = 0.11 Tc(MIN.) = 12.37
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1509.00 = 1855.00 FEET.

*****
FLOW PROCESS FROM NODE 1508.00 TO NODE 1509.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 12.37
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.687
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 2.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 1.40 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 6.90 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 0.10 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 1.50 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 12.30 SUBAREA RUNOFF(CFS) = 38.12
EFFECTIVE AREA(ACRES) = 30.30 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 30.30 PEAK FLOW RATE(CFS) = 93.88

*****
FLOW PROCESS FROM NODE 1509.00 TO NODE 1510.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 610.00 DOWNSTREAM(FEET) = 525.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 816.00 CHANNEL SLOPE = 0.1042
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 93.88
FLOW VELOCITY(FEET/SEC.) = 12.06 FLOW DEPTH(FEET) = 1.67
TRAVEL TIME(MIN.) = 1.13 Tc(MIN.) = 13.49
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1510.00 = 2671.00 FEET.

*****
FLOW PROCESS FROM NODE 1509.00 TO NODE 1510.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 13.49
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.517
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.90 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.90 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 2.60 0.25 1.00 73
NATURAL FAIR COVER
"OPEN BRUSH" D 0.30 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 4.70 SUBAREA RUNOFF(CFS) = 13.83
EFFECTIVE AREA(ACRES) = 35.00 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 35.00 PEAK FLOW RATE(CFS) = 103.08

*****
FLOW PROCESS FROM NODE 1510.00 TO NODE 1511.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 525.00 DOWNSTREAM(FEET) = 522.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 67.00 CHANNEL SLOPE = 0.0448
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 103.08
FLOW VELOCITY(FEET/SEC.) = 9.05 FLOW DEPTH(FEET) = 2.19
TRAVEL TIME(MIN.) = 0.12 Tc(MIN.) = 13.62
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1511.00 = 2738.00 FEET.

*****
FLOW PROCESS FROM NODE 1510.00 TO NODE 1511.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 13.62
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.499
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL POOR COVER
"BARREN" C 2.20 0.25 1.00 91
NATURAL FAIR COVER
"GRASS" C 8.20 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 5.90 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 5.20 0.25 1.00 73
NATURAL POOR COVER
"BARREN" D 1.10 0.20 1.00 93
NATURAL FAIR COVER
"GRASS" D 0.20 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 22.80 SUBAREA RUNOFF(CFS) = 66.73
EFFECTIVE AREA(ACRES) = 57.80 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00

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TOTAL AREA(ACRES) = 57.80 PEAK FLOW RATE(CFS) = 169.25
*****
FLOW PROCESS FROM NODE 1510.00 TO NODE 1511.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 13.62
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.499
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" D 0.20 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 0.20 SUBAREA RUNOFF(CFS) = 0.59
EFFECTIVE AREA(ACRES) = 58.00 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 58.00 PEAK FLOW RATE(CFS) = 169.84
*****
FLOW PROCESS FROM NODE 1511.00 TO NODE 1512.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 522.00 DOWNSTREAM(FEET) = 485.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 313.00 CHANNEL SLOPE = 0.1182
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 169.84
FLOW VELOCITY(FEET/SEC.) = 14.77 FLOW DEPTH(FEET) = 2.21
TRAVEL TIME(MIN.) = 0.35 Tc(MIN.) = 13.97
LONGEST FLOWPATH FROM NODE 1500.00 TO NODE 1512.00 = 3051.00 FEET.
*****
FLOW PROCESS FROM NODE 1511.00 TO NODE 1512.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 13.97
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.448
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.80 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 1.20 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 0.50 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 0.60 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 0.50 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 3.60 SUBAREA RUNOFF(CFS) = 10.41
EFFECTIVE AREA(ACRES) = 61.60 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 61.60 PEAK FLOW RATE(CFS) = 177.60
*****
FLOW PROCESS FROM NODE 1512.00 TO NODE 1512.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 13.97
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.448
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL POOR COVER
"BARREN" B 5.20 0.30 1.00 86
NATURAL POOR COVER
"BARREN" C 55.10 0.25 1.00 91
NATURAL FAIR COVER
"GRASS" C 1.40 0.25 1.00 79

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NATURAL FAIR COVER
"OPEN BRUSH" C 5.70 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 0.10 0.25 1.00 73
NATURAL POOR COVER
"BARREN" D 5.00 0.20 1.00 93
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 72.50 SUBAREA RUNOFF(CFS) = 208.68
EFFECTIVE AREA(ACRES) = 134.10 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 134.10 PEAK FLOW RATE(CFS) = 386.28
*****
FLOW PROCESS FROM NODE 1512.00 TO NODE 1512.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 13.97
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.448
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" D 0.30 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 0.60 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 0.90 SUBAREA RUNOFF(CFS) = 2.63
EFFECTIVE AREA(ACRES) = 135.00 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 135.00 PEAK FLOW RATE(CFS) = 388.91
-----
END OF STUDY SUMMARY:
TOTAL AREA(ACRES) = 135.00 TC(MIN.) = 13.97
EFFECTIVE AREA(ACRES) = 135.00 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
PEAK FLOW RATE(CFS) = 388.91
-----
END OF RATIONAL METHOD ANALYSIS

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NATURAL FAIR COVER
 "OPEN BRUSH" D 0.60 0.20 1.00 83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 24.80 SUBAREA RUNOFF (CFS) = 57.74
 EFFECTIVE AREA (ACRES) = 69.20 AREA-AVERAGED Fm (INCH/HR) = 0.22
 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 69.20 PEAK FLOW RATE (CFS) = 160.90

 FLOW PROCESS FROM NODE 1410.00 TO NODE 1411.00 IS CODE = 81

 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 19.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.805
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND" D 2.30 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 2.30 SUBAREA RUNOFF (CFS) = 5.39
 EFFECTIVE AREA (ACRES) = 71.50 AREA-AVERAGED Fm (INCH/HR) = 0.22
 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 71.50 PEAK FLOW RATE (CFS) = 166.29

 FLOW PROCESS FROM NODE 1411.00 TO NODE 1411.00 IS CODE = 81

 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 19.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.805
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" B 1.10 0.30 1.00 63
 NATURAL FAIR COVER
 "GRASS" B 7.30 0.30 1.00 69
 PUBLIC PARK B 8.90 0.30 0.85 56
 NATURAL FAIR COVER
 "OPEN BRUSH" B 0.70 0.30 1.00 66
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C 59.60 0.25 1.00 75
 NATURAL POOR COVER
 "BARREN" C 1.70 0.25 1.00 91
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA (ACRES) = 79.30 SUBAREA RUNOFF (CFS) = 181.89
 EFFECTIVE AREA (ACRES) = 150.80 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.99
 TOTAL AREA (ACRES) = 150.80 PEAK FLOW RATE (CFS) = 348.18

 FLOW PROCESS FROM NODE 1411.00 TO NODE 1411.00 IS CODE = 81

 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 19.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.805
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS" C 41.60 0.25 1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH" C 45.00 0.25 1.00 77
 PUBLIC PARK C 46.20 0.25 0.85 69
 NATURAL FAIR COVER
 "WOODLAND" C 23.70 0.25 1.00 73
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" D 3.30 0.20 1.00 81
 NATURAL POOR COVER
 "BARREN" D 1.30 0.20 1.00 93
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96

SUBAREA AREA (ACRES) = 161.10 SUBAREA RUNOFF (CFS) = 372.19
 EFFECTIVE AREA (ACRES) = 311.90 AREA-AVERAGED Fm (INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 311.90 PEAK FLOW RATE (CFS) = 720.37

 FLOW PROCESS FROM NODE 1411.00 TO NODE 1411.00 IS CODE = 81

 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 19.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.805
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS" D 27.90 0.20 1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH" D 5.60 0.20 1.00 83
 PUBLIC PARK D 1.10 0.20 0.85 75
 NATURAL FAIR COVER
 "WOODLAND" D 12.80 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 47.40 SUBAREA RUNOFF (CFS) = 111.15
 EFFECTIVE AREA (ACRES) = 359.30 AREA-AVERAGED Fm (INCH/HR) = 0.23
 AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 359.30 PEAK FLOW RATE (CFS) = 831.52

 FLOW PROCESS FROM NODE 1411.00 TO NODE 1411.00 IS CODE = 7

 >>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<<<<<
 >>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<<<<<

 UNIT-HYDROGRAPH DATA:
 RAINFALL (INCH): 5M= 0.52; 30M= 1.09; 1H= 1.45; 3H= 2.43; 6H= 3.36; 24H= 5.63
 S-GRAPH: VALLEY (DEV.) = 0.0%; VALLEY (UNDEV.) / DESERT = 0.0%
 MOUNTAIN = 33.0%; FOOTHILL = 67.0%; DESERT (UNDEV.) = 0.0%
 Tc (HR) = 0.33; LAG (HR) = 0.27; Fm (INCH/HR) = 0.23; Ybar = 0.43
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.98; 30M = 0.98; 1HR = 0.98;
 3HR = 1.00; 6HR = 1.00; 24HR = 1.00
 UNIT-INTERVAL (MIN) = 5.00 TOTAL AREA (ACRES) = 359.30
 LONGEST FLOWPATH FROM NODE 1400.00 TO NODE 1411.00 = 2836.00 FEET.
 EQUIVALENT BASIN FACTOR APPROXIMATIONS:
 Lca/L=0.3, n=.1030; Lca/L=0.4, n=.0923; Lca/L=0.5, n=.0848; Lca/L=0.6, n=.0791
 TIME OF PEAK FLOW (HR) = 16.33 RUNOFF VOLUME (AF) = 107.60
 UNIT-HYDROGRAPH METHOD PEAK FLOW RATE (CFS) = 766.46
 TOTAL PEAK FLOW RATE (CFS) = 766.46 (SOURCE FLOW INCLUDED)
 RATIONAL METHOD PEAK FLOW RATE (CFS) = 831.52
 (UPSTREAM NODE PEAK FLOW RATE (CFS) = 831.52)
 PEAK FLOW RATE (CFS) USED = 831.52

 END OF STUDY SUMMARY:
 TOTAL AREA (ACRES) = 359.30 TC (MIN.) = 19.95
 AREA-AVERAGED Fm (INCH/HR) = 0.23 Ybar = 0.43
 PEAK FLOW RATE (CFS) = 831.52

 END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS

PRELIMINARY DRAFT – FOR INTERNAL USE ONLY

**TECHNICAL APPENDIX III-B
HYDROLOGIC ANALYSIS
PROPOSED CONDITION
100-YEAR HIGH CONFIDENCE**

FLOOD ROUTING ANALYSIS
 USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
 (c) Copyright 1989-2003 Advanced Engineering Software (aes)
 Ver. 8.0 Release Date: 01/01/2003 License ID 1202

Analysis prepared by:

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 714 - 734 - 5100

 FILE NAME: CP13100H.FLD
 TIME/DATE OF STUDY: 12:00 03/14/2004

FLOW PROCESS FROM NODE 1340.00 TO NODE 1375.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<

=====

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 823.000 ACRES
 BASEFLOW = 0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME = 0.460 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
 MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
 STORM RETURN FREQUENCY = 100-YEAR
 VALLEY (DEVELOPED):
 "S"-CURVE PERCENTAGE (DECIMAL NOTATION) = 0.480
 FOOTHILL "S"-CURVE PERCENTAGE (DECIMAL NOTATION) = 0.150
 MOUNTAIN "S"-CURVE PERCENTAGE (DECIMAL NOTATION) = 0.170
 VALLEY (UNDEVELOPED) / DESERT:
 "S"-CURVE PERCENTAGE (DECIMAL NOTATION) = 0.200
 DESERT (UNDEVELOPED) "S"-CURVE PERCENTAGE (DECIMAL NOTATION) = 0.000
 BALANCED STORM PATTERN MULTIPLE DAY RAINFALL AND LOSS DATA:

RAINFALL DEPTHS & LOSS RATES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
5-MINUTE (INCHES)	0.52	0.24	0.10	0.06	0.04
30-MINUTE (INCHES)	1.09	0.50	0.22	0.12	0.08
1-HOUR (INCHES)	1.45	0.67	0.29	0.15	0.11
3-HOUR (INCHES)	2.43	1.12	0.49	0.26	0.19
6-HOUR (INCHES)	3.36	1.55	0.67	0.36	0.26
24-HOUR (INCHES)	5.63	2.59	1.13	0.60	0.43
LOSS RATE (IN/HR)	0.150	0.150	0.150	0.150	0.150
LOW LOSS FRACTION	0.550	0.800	0.970	0.990	0.990

PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.963
 30-MINUTE FACTOR = 0.963
 1-HOUR FACTOR = 0.963
 3-HOUR FACTOR = 0.994
 6-HOUR FACTOR = 0.997
 24-HOUR FACTOR = 0.998

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 18.116

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.333	132.639
2	4.983	363.296
3	12.063	704.686
4	22.654	1054.141
5	34.671	1196.070
6	49.057	1431.855
7	60.836	1172.411
8	69.556	867.905
9	75.856	627.111
10	80.406	452.789
11	83.708	328.660
12	86.267	254.765
13	88.184	190.747
14	89.585	139.498
15	90.634	104.352
16	91.588	94.984
17	92.452	86.013
18	93.231	77.510
19	93.961	72.699
20	94.526	56.198
21	94.950	42.216
22	95.354	40.161
23	95.709	35.402
24	96.008	29.728
25	96.273	26.395
26	96.516	24.138
27	96.755	23.829
28	96.985	22.891
29	97.197	21.101
30	97.389	19.059
31	97.571	18.125
32	97.751	17.902
33	97.931	17.907
34	98.103	17.165
35	98.234	13.072
36	98.354	11.908
37	98.473	11.888
38	98.590	11.600
39	98.693	10.216
40	98.794	10.056
41	98.895	10.057
42	98.996	10.056
43	99.097	10.049
44	99.189	9.220
45	99.266	7.674
46	99.337	6.998
47	99.407	6.999
48	99.477	6.984
49	99.548	6.998
50	99.608	6.021
51	99.651	4.232
52	99.670	1.933
53	99.682	1.204
54	99.694	1.204
55	99.706	1.204
56	99.718	1.197

57	99.730	1.211
58	99.743	1.204
59	99.755	1.204
60	99.767	1.204
61	99.779	1.204
62	99.791	1.197
63	99.803	1.204
64	99.815	1.211
65	99.827	1.197
66	99.839	1.204
67	99.851	1.197
68	99.863	1.197
69	99.875	1.197
70	99.887	1.197
71	99.899	1.197
72	99.911	1.196
73	99.923	1.197
74	99.935	1.197
75	99.948	1.197
76	99.960	1.197
77	99.972	1.197
78	99.984	1.197
79	99.996	1.197
80	100.000	0.438

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 390.0630
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 320.4894

=====

5 - DAY DESIGN STORM
 RUNOFF HYDROGRAPH
 (see HYDROLOGY MANUAL for Definition of "PEAK DAY")

=====

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

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	350.0	700.0	1050.0	1400.0
0.083	0.0000	0.00	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.083)							
0.167	0.0000	0.00	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.167)							
0.250	0.0001	0.01	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.250)							
0.333	0.0002	0.01	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.333)							
0.417	0.0003	0.02	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.417)							
0.500	0.0005	0.03	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.500)							
0.583	0.0007	0.03	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.583)							
0.667	0.0010	0.04	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.667)							
0.750	0.0013	0.04	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.750)							
0.833	0.0016	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.833)							
0.917	0.0019	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 0.917)							
1.000	0.0022	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.000)							
1.083	0.0026	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.083)							
1.167	0.0029	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.167)							
1.250	0.0033	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.250)							
1.333	0.0037	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.333)							
1.417	0.0040	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.417)							
1.500	0.0044	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.500)							
1.583	0.0048	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.583)							
1.667	0.0051	0.05	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.667)							
1.750	0.0055	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.750)							
1.833	0.0059	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.833)							
1.917	0.0063	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 1.917)							
2.000	0.0067	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.000)							
2.083	0.0071	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.083)							
2.167	0.0075	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.167)							
2.250	0.0079	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.250)							
2.333	0.0082	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.333)							

2.417	0.0086	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.417)							
2.500	0.0090	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.500)							
2.583	0.0095	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.583)							
2.667	0.0099	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.667)							
2.750	0.0103	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.750)							
2.833	0.0107	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.833)							
2.917	0.0111	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 2.917)							
3.000	0.0115	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.000)							
3.083	0.0119	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.083)							
3.167	0.0123	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.167)							
3.250	0.0128	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.250)							
3.333	0.0132	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.333)							
3.417	0.0136	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.417)							
3.500	0.0140	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.500)							
3.583	0.0145	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.583)							
3.667	0.0149	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.667)							
3.750	0.0153	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.750)							
3.833	0.0158	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.833)							
3.917	0.0162	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 3.917)							
4.000	0.0166	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.000)							
4.083	0.0171	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.083)							
4.167	0.0175	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.167)							
4.250	0.0180	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.250)							
4.333	0.0184	0.06	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.333)							
4.417	0.0189	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.417)							
4.500	0.0193	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.500)							
4.583	0.0198	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.583)							
4.667	0.0202	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.667)							
4.750	0.0207	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.750)							
4.833	0.0211	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.833)							
4.917	0.0216	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 4.917)							
5.000	0.0221	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 5.000)							
5.083	0.0225	0.07	Q	.	.	.	.
(PEAK DAY 5, HOUR 5.083)							
5.167	0.0230	0.07	Q	.	.	.	.

(PEAK DAY 5, HOUR 5.167)									
5.250	0.0235	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.250)									
5.333	0.0239	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.333)									
5.417	0.0244	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.417)									
5.500	0.0249	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.500)									
5.583	0.0254	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.583)									
5.667	0.0259	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.667)									
5.750	0.0263	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.750)									
5.833	0.0268	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.833)									
5.917	0.0273	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 5.917)									
6.000	0.0278	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.000)									
6.083	0.0283	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.083)									
6.167	0.0288	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.167)									
6.250	0.0293	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.250)									
6.333	0.0298	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.333)									
6.417	0.0303	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.417)									
6.500	0.0308	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.500)									
6.583	0.0313	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.583)									
6.667	0.0318	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.667)									
6.750	0.0323	0.07	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.750)									
6.833	0.0329	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.833)									
6.917	0.0334	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 6.917)									
7.000	0.0339	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.000)									
7.083	0.0344	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.083)									
7.167	0.0350	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.167)									
7.250	0.0355	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.250)									
7.333	0.0360	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.333)									
7.417	0.0366	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.417)									
7.500	0.0371	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.500)									
7.583	0.0376	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.583)									
7.667	0.0382	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.667)									
7.750	0.0387	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.750)									
7.833	0.0393	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.833)									
7.917	0.0399	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 7.917)									

8.000	0.0404	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.000)									
8.083	0.0410	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.083)									
8.167	0.0415	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.167)									
8.250	0.0421	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.250)									
8.333	0.0427	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.333)									
8.417	0.0433	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.417)									
8.500	0.0438	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.500)									
8.583	0.0444	0.08	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.583)									
8.667	0.0450	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.667)									
8.750	0.0456	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.750)									
8.833	0.0462	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.833)									
8.917	0.0468	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 8.917)									
9.000	0.0474	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.000)									
9.083	0.0480	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.083)									
9.167	0.0486	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.167)									
9.250	0.0493	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.250)									
9.333	0.0499	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.333)									
9.417	0.0505	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.417)									
9.500	0.0511	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.500)									
9.583	0.0518	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.583)									
9.667	0.0524	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.667)									
9.750	0.0531	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.750)									
9.833	0.0537	0.09	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.833)									
9.917	0.0544	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 9.917)									
10.000	0.0550	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.000)									
10.083	0.0557	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.083)									
10.167	0.0564	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.167)									
10.250	0.0570	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.250)									
10.333	0.0577	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.333)									
10.417	0.0584	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.417)									
10.500	0.0591	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.500)									
10.583	0.0598	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.583)									
10.667	0.0605	0.10	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 10.667)									
10.750	0.0612	0.10	Q	.	.	.	.	.	.

(PEAK DAY 5, HOUR 10.750)					
10.833	0.0619	0.10	Q	.	.
(PEAK DAY 5, HOUR 10.833)					
10.917	0.0627	0.11	Q	.	.
(PEAK DAY 5, HOUR 10.917)					
11.000	0.0634	0.11	Q	.	.
(PEAK DAY 5, HOUR 11.000)					
11.083	0.0641	0.11	Q	.	.
(PEAK DAY 5, HOUR 11.083)					
11.167	0.0649	0.11	Q	.	.
(PEAK DAY 5, HOUR 11.167)					
11.250	0.0656	0.11	Q	.	.
(PEAK DAY 5, HOUR 11.250)					
11.333	0.0664	0.11	Q	.	.
(PEAK DAY 5, HOUR 11.333)					
11.417	0.0672	0.11	Q	.	.
(PEAK DAY 5, HOUR 11.417)					
11.500	0.0679	0.11	Q	.	.
(PEAK DAY 5, HOUR 11.500)					
11.583	0.0687	0.11	Q	.	.
(PEAK DAY 5, HOUR 11.583)					
11.667	0.0695	0.12	Q	.	.
(PEAK DAY 5, HOUR 11.667)					
11.750	0.0703	0.12	Q	.	.
(PEAK DAY 5, HOUR 11.750)					
11.833	0.0711	0.12	Q	.	.
(PEAK DAY 5, HOUR 11.833)					
11.917	0.0719	0.12	Q	.	.
(PEAK DAY 5, HOUR 11.917)					
12.000	0.0728	0.12	Q	.	.
(PEAK DAY 5, HOUR 12.000)					
12.083	0.0736	0.12	Q	.	.
(PEAK DAY 5, HOUR 12.083)					
12.167	0.0745	0.12	Q	.	.
(PEAK DAY 5, HOUR 12.167)					
12.250	0.0754	0.13	Q	.	.
(PEAK DAY 5, HOUR 12.250)					
12.333	0.0763	0.13	Q	.	.
(PEAK DAY 5, HOUR 12.333)					
12.417	0.0772	0.14	Q	.	.
(PEAK DAY 5, HOUR 12.417)					
12.500	0.0782	0.15	Q	.	.
(PEAK DAY 5, HOUR 12.500)					
12.583	0.0793	0.15	Q	.	.
(PEAK DAY 5, HOUR 12.583)					
12.667	0.0804	0.16	Q	.	.
(PEAK DAY 5, HOUR 12.667)					
12.750	0.0815	0.16	Q	.	.
(PEAK DAY 5, HOUR 12.750)					
12.833	0.0826	0.16	Q	.	.
(PEAK DAY 5, HOUR 12.833)					
12.917	0.0838	0.17	Q	.	.
(PEAK DAY 5, HOUR 12.917)					
13.000	0.0850	0.17	Q	.	.
(PEAK DAY 5, HOUR 13.000)					
13.083	0.0861	0.17	Q	.	.
(PEAK DAY 5, HOUR 13.083)					
13.167	0.0874	0.18	Q	.	.
(PEAK DAY 5, HOUR 13.167)					
13.250	0.0886	0.18	Q	.	.
(PEAK DAY 5, HOUR 13.250)					
13.333	0.0898	0.18	Q	.	.
(PEAK DAY 5, HOUR 13.333)					
13.417	0.0911	0.18	Q	.	.
(PEAK DAY 5, HOUR 13.417)					
13.500	0.0924	0.19	Q	.	.
(PEAK DAY 5, HOUR 13.500)					

13.583	0.0937	0.19	Q	.	.
(PEAK DAY 5, HOUR 13.583)					
13.667	0.0951	0.19	Q	.	.
(PEAK DAY 5, HOUR 13.667)					
13.750	0.0964	0.20	Q	.	.
(PEAK DAY 5, HOUR 13.750)					
13.833	0.0978	0.20	Q	.	.
(PEAK DAY 5, HOUR 13.833)					
13.917	0.0992	0.20	Q	.	.
(PEAK DAY 5, HOUR 13.917)					
14.000	0.1006	0.21	Q	.	.
(PEAK DAY 5, HOUR 14.000)					
14.083	0.1021	0.21	Q	.	.
(PEAK DAY 5, HOUR 14.083)					
14.167	0.1036	0.22	Q	.	.
(PEAK DAY 5, HOUR 14.167)					
14.250	0.1051	0.22	Q	.	.
(PEAK DAY 5, HOUR 14.250)					
14.333	0.1066	0.23	Q	.	.
(PEAK DAY 5, HOUR 14.333)					
14.417	0.1082	0.23	Q	.	.
(PEAK DAY 5, HOUR 14.417)					
14.500	0.1099	0.24	Q	.	.
(PEAK DAY 5, HOUR 14.500)					
14.583	0.1116	0.25	Q	.	.
(PEAK DAY 5, HOUR 14.583)					
14.667	0.1133	0.25	Q	.	.
(PEAK DAY 5, HOUR 14.667)					
14.750	0.1151	0.26	Q	.	.
(PEAK DAY 5, HOUR 14.750)					
14.833	0.1170	0.27	Q	.	.
(PEAK DAY 5, HOUR 14.833)					
14.917	0.1189	0.27	Q	.	.
(PEAK DAY 5, HOUR 14.917)					
15.000	0.1208	0.28	Q	.	.
(PEAK DAY 5, HOUR 15.000)					
15.083	0.1228	0.29	Q	.	.
(PEAK DAY 5, HOUR 15.083)					
15.167	0.1249	0.30	Q	.	.
(PEAK DAY 5, HOUR 15.167)					
15.250	0.1270	0.31	Q	.	.
(PEAK DAY 5, HOUR 15.250)					
15.333	0.1292	0.32	Q	.	.
(PEAK DAY 5, HOUR 15.333)					
15.417	0.1315	0.33	Q	.	.
(PEAK DAY 5, HOUR 15.417)					
15.500	0.1339	0.34	Q	.	.
(PEAK DAY 5, HOUR 15.500)					
15.583	0.1363	0.35	Q	.	.
(PEAK DAY 5, HOUR 15.583)					
15.667	0.1388	0.36	Q	.	.
(PEAK DAY 5, HOUR 15.667)					
15.750	0.1414	0.38	Q	.	.
(PEAK DAY 5, HOUR 15.750)					
15.833	0.1441	0.39	Q	.	.
(PEAK DAY 5, HOUR 15.833)					
15.917	0.1470	0.42	Q	.	.
(PEAK DAY 5, HOUR 15.917)					
16.000	0.1503	0.47	Q	.	.
(PEAK DAY 5, HOUR 16.000)					
16.083	0.1775	3.95	Q	.	.
(PEAK DAY 5, HOUR 16.083)					
16.167	0.2461	9.96	Q	.	.
(PEAK DAY 5, HOUR 16.167)					
16.250	0.3757	18.81	Q	.	.
(PEAK DAY 5, HOUR 16.250)					
16.333	0.5674	27.84	Q	.	.

(PEAK DAY 5, HOUR 16.333)									
16.417	0.7844	31.51	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 16.417)									
16.500	1.0428	37.52	VQ	.	.	.	.	.	.
(PEAK DAY 5, HOUR 16.500)									
16.583	1.2549	30.80	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 16.583)									
16.667	1.4127	22.91	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 16.667)									
16.750	1.5274	16.66	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 16.750)									
16.833	1.6110	12.13	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 16.833)									
16.917	1.6723	8.90	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 16.917)									
17.000	1.7203	6.97	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.000)									
17.083	1.7567	5.29	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.083)									
17.167	1.7839	3.95	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.167)									
17.250	1.8048	3.03	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.250)									
17.333	1.8238	2.77	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.333)									
17.417	1.8412	2.52	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.417)									
17.500	1.8569	2.28	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.500)									
17.583	1.8716	2.14	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.583)									
17.667	1.8834	1.71	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.667)									
17.750	1.8926	1.34	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.750)									
17.833	1.9014	1.27	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.833)									
17.917	1.9092	1.14	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 17.917)									
18.000	1.9160	0.99	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.000)									
18.083	1.9222	0.89	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.083)									
18.167	1.9279	0.83	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.167)									
18.250	1.9335	0.81	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.250)									
18.333	1.9389	0.78	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.333)									
18.417	1.9438	0.72	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.417)									
18.500	1.9484	0.66	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.500)									
18.583	1.9527	0.63	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.583)									
18.667	1.9570	0.62	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.667)									
18.750	1.9612	0.61	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.750)									
18.833	1.9652	0.59	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.833)									
18.917	1.9685	0.48	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 18.917)									
19.000	1.9715	0.44	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.000)									
19.083	1.9745	0.44	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.083)									

19.167	1.9775	0.43	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.167)									
19.250	1.9802	0.39	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.250)									
19.333	1.9828	0.38	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.333)									
19.417	1.9854	0.38	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.417)									
19.500	1.9880	0.38	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.500)									
19.583	1.9905	0.37	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.583)									
19.667	1.9929	0.35	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.667)									
19.750	1.9951	0.31	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.750)									
19.833	1.9970	0.29	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.833)									
19.917	1.9990	0.29	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 19.917)									
20.000	2.0010	0.28	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.000)									
20.083	2.0029	0.28	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.083)									
20.167	2.0046	0.25	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.167)									
20.250	2.0061	0.21	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.250)									
20.333	2.0071	0.15	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.333)									
20.417	2.0079	0.12	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.417)									
20.500	2.0088	0.12	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.500)									
20.583	2.0096	0.12	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.583)									
20.667	2.0104	0.12	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.667)									
20.750	2.0113	0.12	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.750)									
20.833	2.0121	0.12	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.833)									
20.917	2.0129	0.12	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 20.917)									
21.000	2.0137	0.12	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.000)									
21.083	2.0145	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.083)									
21.167	2.0152	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.167)									
21.250	2.0160	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.250)									
21.333	2.0168	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.333)									
21.417	2.0175	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.417)									
21.500	2.0183	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.500)									
21.583	2.0190	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.583)									
21.667	2.0198	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.667)									
21.750	2.0205	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.750)									
21.833	2.0212	0.11	Q	.	.	.	.	.	.
(PEAK DAY 5, HOUR 21.833)									
21.917	2.0220	0.10	Q	.	.	.	.	.	.

(PEAK DAY 5, HOUR 21.917)					
22.000	2.0227	0.10	Q	.	.
(PEAK DAY 5, HOUR 22.000)					
22.083	2.0234	0.10	Q	.	.
(PEAK DAY 5, HOUR 22.083)					
22.167	2.0241	0.10	Q	.	.
(PEAK DAY 5, HOUR 22.167)					
22.250	2.0248	0.10	Q	.	.
(PEAK DAY 5, HOUR 22.250)					
22.333	2.0255	0.10	Q	.	.
(PEAK DAY 5, HOUR 22.333)					
22.417	2.0262	0.10	Q	.	.
(PEAK DAY 5, HOUR 22.417)					
22.500	2.0269	0.10	Q	.	.
(PEAK DAY 5, HOUR 22.500)					
22.583	2.0276	0.10	Q	.	.
(PEAK DAY 5, HOUR 22.583)					
22.667	2.0281	0.08	Q	.	.
(PEAK DAY 5, HOUR 22.667)					
22.750	2.0286	0.07	Q	.	.
(PEAK DAY 5, HOUR 22.750)					
22.833	2.0290	0.07	Q	.	.
(PEAK DAY 5, HOUR 22.833)					
22.917	2.0295	0.07	Q	.	.
(PEAK DAY 5, HOUR 22.917)					
23.000	2.0299	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.000)					
23.083	2.0304	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.083)					
23.167	2.0308	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.167)					
23.250	2.0312	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.250)					
23.333	2.0317	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.333)					
23.417	2.0321	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.417)					
23.500	2.0325	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.500)					
23.583	2.0329	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.583)					
23.667	2.0334	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.667)					
23.750	2.0338	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.750)					
23.833	2.0342	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.833)					
23.917	2.0346	0.06	Q	.	.
(PEAK DAY 5, HOUR 23.917)					
24.000	2.0350	0.06	Q	.	.
(PEAK DAY 5, HOUR 24.000)					
24.083	2.0354	0.06	Q	.	.
(PEAK DAY 4, HOUR 0.083)					
24.167	2.0358	0.06	Q	.	.
(PEAK DAY 4, HOUR 0.167)					
24.250	2.0362	0.06	Q	.	.
(PEAK DAY 4, HOUR 0.250)					
24.333	2.0367	0.06	Q	.	.
(PEAK DAY 4, HOUR 0.333)					
24.417	2.0371	0.06	Q	.	.
(PEAK DAY 4, HOUR 0.417)					
24.500	2.0376	0.07	Q	.	.
(PEAK DAY 4, HOUR 0.500)					
24.583	2.0381	0.07	Q	.	.
(PEAK DAY 4, HOUR 0.583)					
24.667	2.0386	0.07	Q	.	.
(PEAK DAY 4, HOUR 0.667)					

24.750	2.0391	0.07	Q	.	.
(PEAK DAY 4, HOUR 0.750)					
24.833	2.0396	0.07	Q	.	.
(PEAK DAY 4, HOUR 0.833)					
24.917	2.0401	0.08	Q	.	.
(PEAK DAY 4, HOUR 0.917)					
25.000	2.0406	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.000)					
25.083	2.0412	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.083)					
25.167	2.0417	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.167)					
25.250	2.0422	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.250)					
25.333	2.0428	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.333)					
25.417	2.0433	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.417)					
25.500	2.0438	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.500)					
25.583	2.0444	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.583)					
25.667	2.0449	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.667)					
25.750	2.0455	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.750)					
25.833	2.0460	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.833)					
25.917	2.0466	0.08	Q	.	.
(PEAK DAY 4, HOUR 1.917)					
26.000	2.0472	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.000)					
26.083	2.0477	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.083)					
26.167	2.0483	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.167)					
26.250	2.0488	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.250)					
26.333	2.0494	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.333)					
26.417	2.0500	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.417)					
26.500	2.0506	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.500)					
26.583	2.0511	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.583)					
26.667	2.0517	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.667)					
26.750	2.0523	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.750)					
26.833	2.0529	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.833)					
26.917	2.0534	0.08	Q	.	.
(PEAK DAY 4, HOUR 2.917)					
27.000	2.0540	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.000)					
27.083	2.0546	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.083)					
27.167	2.0552	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.167)					
27.250	2.0558	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.250)					
27.333	2.0564	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.333)					
27.417	2.0570	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.417)					
27.500	2.0576	0.09	Q	.	.

(PEAK DAY 4, HOUR 3.500)					
27.583	2.0582	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.583)					
27.667	2.0588	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.667)					
27.750	2.0594	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.750)					
27.833	2.0600	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.833)					
27.917	2.0606	0.09	Q	.	.
(PEAK DAY 4, HOUR 3.917)					
28.000	2.0612	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.000)					
28.083	2.0619	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.083)					
28.167	2.0625	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.167)					
28.250	2.0631	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.250)					
28.333	2.0637	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.333)					
28.417	2.0644	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.417)					
28.500	2.0650	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.500)					
28.583	2.0656	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.583)					
28.667	2.0663	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.667)					
28.750	2.0669	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.750)					
28.833	2.0675	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.833)					
28.917	2.0682	0.09	Q	.	.
(PEAK DAY 4, HOUR 4.917)					
29.000	2.0688	0.09	Q	.	.
(PEAK DAY 4, HOUR 5.000)					
29.083	2.0695	0.09	Q	.	.
(PEAK DAY 4, HOUR 5.083)					
29.167	2.0701	0.09	Q	.	.
(PEAK DAY 4, HOUR 5.167)					
29.250	2.0708	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.250)					
29.333	2.0715	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.333)					
29.417	2.0721	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.417)					
29.500	2.0728	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.500)					
29.583	2.0735	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.583)					
29.667	2.0741	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.667)					
29.750	2.0748	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.750)					
29.833	2.0755	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.833)					
29.917	2.0762	0.10	Q	.	.
(PEAK DAY 4, HOUR 5.917)					
30.000	2.0769	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.000)					
30.083	2.0775	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.083)					
30.167	2.0782	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.167)					
30.250	2.0789	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.250)					

30.333	2.0796	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.333)					
30.417	2.0803	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.417)					
30.500	2.0810	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.500)					
30.583	2.0817	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.583)					
30.667	2.0825	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.667)					
30.750	2.0832	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.750)					
30.833	2.0839	0.10	Q	.	.
(PEAK DAY 4, HOUR 6.833)					
30.917	2.0846	0.11	Q	.	.
(PEAK DAY 4, HOUR 6.917)					
31.000	2.0854	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.000)					
31.083	2.0861	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.083)					
31.167	2.0868	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.167)					
31.250	2.0876	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.250)					
31.333	2.0883	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.333)					
31.417	2.0891	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.417)					
31.500	2.0898	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.500)					
31.583	2.0906	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.583)					
31.667	2.0913	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.667)					
31.750	2.0921	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.750)					
31.833	2.0929	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.833)					
31.917	2.0937	0.11	Q	.	.
(PEAK DAY 4, HOUR 7.917)					
32.000	2.0944	0.11	Q	.	.
(PEAK DAY 4, HOUR 8.000)					
32.083	2.0952	0.11	Q	.	.
(PEAK DAY 4, HOUR 8.083)					
32.167	2.0960	0.11	Q	.	.
(PEAK DAY 4, HOUR 8.167)					
32.250	2.0968	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.250)					
32.333	2.0976	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.333)					
32.417	2.0984	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.417)					
32.500	2.0992	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.500)					
32.583	2.1000	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.583)					
32.667	2.1009	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.667)					
32.750	2.1017	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.750)					
32.833	2.1025	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.833)					
32.917	2.1034	0.12	Q	.	.
(PEAK DAY 4, HOUR 8.917)					
33.000	2.1042	0.12	Q	.	.
(PEAK DAY 4, HOUR 9.000)					
33.083	2.1051	0.12	Q	.	.

(PEAK DAY 4, HOUR 9.083)									
33.167	2.1059	0.12	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.167)									
33.250	2.1068	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.250)									
33.333	2.1076	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.333)									
33.417	2.1085	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.417)									
33.500	2.1094	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.500)									
33.583	2.1103	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.583)									
33.667	2.1112	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.667)									
33.750	2.1121	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.750)									
33.833	2.1130	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.833)									
33.917	2.1139	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 9.917)									
34.000	2.1148	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.000)									
34.083	2.1158	0.13	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.083)									
34.167	2.1167	0.14	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.167)									
34.250	2.1176	0.14	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.250)									
34.333	2.1186	0.14	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.333)									
34.417	2.1195	0.14	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.417)									
34.500	2.1205	0.14	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.500)									
34.583	2.1215	0.14	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.583)									
34.667	2.1225	0.14	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.667)									
34.750	2.1235	0.14	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.750)									
34.833	2.1245	0.15	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.833)									
34.917	2.1255	0.15	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 10.917)									
35.000	2.1265	0.15	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.000)									
35.083	2.1275	0.15	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.083)									
35.167	2.1286	0.15	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.167)									
35.250	2.1296	0.15	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.250)									
35.333	2.1307	0.15	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.333)									
35.417	2.1318	0.16	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.417)									
35.500	2.1328	0.16	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.500)									
35.583	2.1339	0.16	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.583)									
35.667	2.1350	0.16	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.667)									
35.750	2.1362	0.16	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.750)									
35.833	2.1373	0.16	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.833)									

35.917	2.1384	0.17	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 11.917)									
36.000	2.1396	0.17	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.000)									
36.083	2.1408	0.17	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.083)									
36.167	2.1420	0.17	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.167)									
36.250	2.1432	0.18	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.250)									
36.333	2.1445	0.19	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.333)									
36.417	2.1458	0.19	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.417)									
36.500	2.1472	0.20	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.500)									
36.583	2.1487	0.21	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.583)									
36.667	2.1502	0.22	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.667)									
36.750	2.1518	0.22	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.750)									
36.833	2.1533	0.23	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.833)									
36.917	2.1549	0.23	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 12.917)									
37.000	2.1566	0.24	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.000)									
37.083	2.1583	0.24	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.083)									
37.167	2.1599	0.25	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.167)									
37.250	2.1617	0.25	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.250)									
37.333	2.1634	0.25	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.333)									
37.417	2.1652	0.26	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.417)									
37.500	2.1670	0.26	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.500)									
37.583	2.1688	0.27	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.583)									
37.667	2.1707	0.27	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.667)									
37.750	2.1726	0.27	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.750)									
37.833	2.1745	0.28	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.833)									
37.917	2.1765	0.28	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 13.917)									
38.000	2.1784	0.29	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.000)									
38.083	2.1805	0.29	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.083)									
38.167	2.1825	0.30	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.167)									
38.250	2.1847	0.31	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.250)									
38.333	2.1868	0.32	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.333)									
38.417	2.1891	0.32	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.417)									
38.500	2.1914	0.33	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.500)									
38.583	2.1938	0.34	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.583)									
38.667	2.1962	0.35	Q	.	.	.	.	.	.

(PEAK DAY 4, HOUR 14.667)									
38.750	2.1987	0.36	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.750)									
38.833	2.2013	0.37	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.833)									
38.917	2.2039	0.38	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 14.917)									
39.000	2.2066	0.39	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.000)									
39.083	2.2094	0.41	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.083)									
39.167	2.2123	0.42	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.167)									
39.250	2.2153	0.43	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.250)									
39.333	2.2184	0.45	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.333)									
39.417	2.2216	0.46	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.417)									
39.500	2.2249	0.48	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.500)									
39.583	2.2283	0.49	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.583)									
39.667	2.2318	0.51	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.667)									
39.750	2.2354	0.53	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.750)									
39.833	2.2392	0.55	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.833)									
39.917	2.2435	0.63	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 15.917)									
40.000	2.2533	1.43	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.000)									
40.083	2.3097	8.19	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.083)									
40.167	2.4442	19.52	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.167)									
40.250	2.6875	35.33	VQ	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.250)									
40.333	3.0347	50.42	VQ	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.333)									
40.417	3.4296	57.33	VQ	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.417)									
40.500	3.8807	65.50	VQ	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.500)									
40.583	4.2475	53.25	VQ	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.583)									
40.667	4.5195	39.50	VQ	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.667)									
40.750	4.7171	28.69	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.750)									
40.833	4.8609	20.87	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.833)									
40.917	4.9667	15.37	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 16.917)									
41.000	5.0491	11.97	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.000)									
41.083	5.1115	9.05	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.083)									
41.167	5.1579	6.75	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.167)									
41.250	5.1940	5.23	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.250)									
41.333	5.2269	4.78	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.333)									
41.417	5.2568	4.34	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.417)									

41.500	5.2840	3.95	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.500)									
41.583	5.3091	3.64	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.583)									
41.667	5.3289	2.88	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.667)									
41.750	5.3447	2.28	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.750)									
41.833	5.3595	2.16	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.833)									
41.917	5.3728	1.92	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 17.917)									
42.000	5.3842	1.66	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.000)									
42.083	5.3946	1.51	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.083)									
42.167	5.4042	1.40	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.167)									
42.250	5.4137	1.37	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.250)									
42.333	5.4227	1.31	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.333)									
42.417	5.4311	1.21	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.417)									
42.500	5.4387	1.11	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.500)									
42.583	5.4460	1.06	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.583)									
42.667	5.4532	1.04	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.667)									
42.750	5.4603	1.03	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.750)									
42.833	5.4670	0.97	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.833)									
42.917	5.4724	0.79	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 18.917)									
43.000	5.4775	0.74	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.000)									
43.083	5.4826	0.73	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.083)									
43.167	5.4874	0.71	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.167)									
43.250	5.4919	0.64	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.250)									
43.333	5.4962	0.63	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.333)									
43.417	5.5006	0.63	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.417)									
43.500	5.5049	0.63	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.500)									
43.583	5.5091	0.62	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.583)									
43.667	5.5131	0.57	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.667)									
43.750	5.5166	0.50	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.750)									
43.833	5.5198	0.47	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.833)									
43.917	5.5230	0.47	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 19.917)									
44.000	5.5263	0.47	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 20.000)									
44.083	5.5294	0.46	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 20.083)									
44.167	5.5322	0.41	Q	.	.	.	.	.	.
(PEAK DAY 4, HOUR 20.167)									
44.250	5.5344	0.32	Q	.	.	.	.	.	.

(PEAK DAY 3, HOUR 1.833)					
49.917	5.6306	0.44	Q	.	.
(PEAK DAY 3, HOUR 1.917)					
50.000	5.6337	0.45	Q	.	.
(PEAK DAY 3, HOUR 2.000)					
50.083	5.6368	0.45	Q	.	.
(PEAK DAY 3, HOUR 2.083)					
50.167	5.6399	0.45	Q	.	.
(PEAK DAY 3, HOUR 2.167)					
50.250	5.6431	0.45	Q	.	.
(PEAK DAY 3, HOUR 2.250)					
50.333	5.6462	0.46	Q	.	.
(PEAK DAY 3, HOUR 2.333)					
50.417	5.6494	0.46	Q	.	.
(PEAK DAY 3, HOUR 2.417)					
50.500	5.6526	0.46	Q	.	.
(PEAK DAY 3, HOUR 2.500)					
50.583	5.6558	0.46	Q	.	.
(PEAK DAY 3, HOUR 2.583)					
50.667	5.6590	0.47	Q	.	.
(PEAK DAY 3, HOUR 2.667)					
50.750	5.6622	0.47	Q	.	.
(PEAK DAY 3, HOUR 2.750)					
50.833	5.6655	0.47	Q	.	.
(PEAK DAY 3, HOUR 2.833)					
50.917	5.6687	0.47	Q	.	.
(PEAK DAY 3, HOUR 2.917)					
51.000	5.6720	0.48	Q	.	.
(PEAK DAY 3, HOUR 3.000)					
51.083	5.6753	0.48	Q	.	.
(PEAK DAY 3, HOUR 3.083)					
51.167	5.6786	0.48	Q	.	.
(PEAK DAY 3, HOUR 3.167)					
51.250	5.6819	0.48	Q	.	.
(PEAK DAY 3, HOUR 3.250)					
51.333	5.6853	0.49	Q	.	.
(PEAK DAY 3, HOUR 3.333)					
51.417	5.6886	0.49	Q	.	.
(PEAK DAY 3, HOUR 3.417)					
51.500	5.6920	0.49	Q	.	.
(PEAK DAY 3, HOUR 3.500)					
51.583	5.6954	0.49	Q	.	.
(PEAK DAY 3, HOUR 3.583)					
51.667	5.6988	0.49	Q	.	.
(PEAK DAY 3, HOUR 3.667)					
51.750	5.7022	0.50	Q	.	.
(PEAK DAY 3, HOUR 3.750)					
51.833	5.7056	0.50	Q	.	.
(PEAK DAY 3, HOUR 3.833)					
51.917	5.7091	0.50	Q	.	.
(PEAK DAY 3, HOUR 3.917)					
52.000	5.7126	0.50	Q	.	.
(PEAK DAY 3, HOUR 4.000)					
52.083	5.7160	0.51	Q	.	.
(PEAK DAY 3, HOUR 4.083)					
52.167	5.7195	0.51	Q	.	.
(PEAK DAY 3, HOUR 4.167)					
52.250	5.7231	0.51	Q	.	.
(PEAK DAY 3, HOUR 4.250)					
52.333	5.7266	0.51	Q	.	.
(PEAK DAY 3, HOUR 4.333)					
52.417	5.7301	0.51	Q	.	.
(PEAK DAY 3, HOUR 4.417)					
52.500	5.7337	0.52	Q	.	.
(PEAK DAY 3, HOUR 4.500)					
52.583	5.7373	0.52	Q	.	.
(PEAK DAY 3, HOUR 4.583)					

52.667	5.7409	0.52	Q	.	.
(PEAK DAY 3, HOUR 4.667)					
52.750	5.7445	0.52	Q	.	.
(PEAK DAY 3, HOUR 4.750)					
52.833	5.7481	0.53	Q	.	.
(PEAK DAY 3, HOUR 4.833)					
52.917	5.7517	0.53	Q	.	.
(PEAK DAY 3, HOUR 4.917)					
53.000	5.7554	0.53	Q	.	.
(PEAK DAY 3, HOUR 5.000)					
53.083	5.7591	0.53	Q	.	.
(PEAK DAY 3, HOUR 5.083)					
53.167	5.7628	0.54	Q	.	.
(PEAK DAY 3, HOUR 5.167)					
53.250	5.7665	0.54	Q	.	.
(PEAK DAY 3, HOUR 5.250)					
53.333	5.7702	0.54	Q	.	.
(PEAK DAY 3, HOUR 5.333)					
53.417	5.7739	0.54	Q	.	.
(PEAK DAY 3, HOUR 5.417)					
53.500	5.7777	0.55	Q	.	.
(PEAK DAY 3, HOUR 5.500)					
53.583	5.7815	0.55	Q	.	.
(PEAK DAY 3, HOUR 5.583)					
53.667	5.7853	0.55	Q	.	.
(PEAK DAY 3, HOUR 5.667)					
53.750	5.7891	0.55	Q	.	.
(PEAK DAY 3, HOUR 5.750)					
53.833	5.7929	0.56	Q	.	.
(PEAK DAY 3, HOUR 5.833)					
53.917	5.7968	0.56	Q	.	.
(PEAK DAY 3, HOUR 5.917)					
54.000	5.8006	0.56	Q	.	.
(PEAK DAY 3, HOUR 6.000)					
54.083	5.8045	0.57	Q	.	.
(PEAK DAY 3, HOUR 6.083)					
54.167	5.8085	0.57	Q	.	.
(PEAK DAY 3, HOUR 6.167)					
54.250	5.8124	0.57	Q	.	.
(PEAK DAY 3, HOUR 6.250)					
54.333	5.8163	0.57	Q	.	.
(PEAK DAY 3, HOUR 6.333)					
54.417	5.8203	0.58	Q	.	.
(PEAK DAY 3, HOUR 6.417)					
54.500	5.8243	0.58	Q	.	.
(PEAK DAY 3, HOUR 6.500)					
54.583	5.8283	0.58	Q	.	.
(PEAK DAY 3, HOUR 6.583)					
54.667	5.8323	0.59	Q	.	.
(PEAK DAY 3, HOUR 6.667)					
54.750	5.8364	0.59	Q	.	.
(PEAK DAY 3, HOUR 6.750)					
54.833	5.8405	0.59	Q	.	.
(PEAK DAY 3, HOUR 6.833)					
54.917	5.8446	0.60	Q	.	.
(PEAK DAY 3, HOUR 6.917)					
55.000	5.8487	0.60	Q	.	.
(PEAK DAY 3, HOUR 7.000)					
55.083	5.8528	0.60	Q	.	.
(PEAK DAY 3, HOUR 7.083)					
55.167	5.8570	0.61	Q	.	.
(PEAK DAY 3, HOUR 7.167)					
55.250	5.8612	0.61	Q	.	.
(PEAK DAY 3, HOUR 7.250)					
55.333	5.8654	0.61	Q	.	.
(PEAK DAY 3, HOUR 7.333)					
55.417	5.8697	0.62	Q	.	.

(PEAK DAY 3, HOUR 7.417)									
55.500	5.8739	0.62	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 7.500)									
55.583	5.8782	0.62	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 7.583)									
55.667	5.8825	0.63	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 7.667)									
55.750	5.8869	0.63	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 7.750)									
55.833	5.8912	0.63	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 7.833)									
55.917	5.8956	0.64	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 7.917)									
56.000	5.9000	0.64	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.000)									
56.083	5.9045	0.64	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.083)									
56.167	5.9089	0.65	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.167)									
56.250	5.9134	0.65	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.250)									
56.333	5.9180	0.66	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.333)									
56.417	5.9225	0.66	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.417)									
56.500	5.9271	0.67	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.500)									
56.583	5.9317	0.67	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.583)									
56.667	5.9363	0.67	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.667)									
56.750	5.9410	0.68	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.750)									
56.833	5.9457	0.68	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.833)									
56.917	5.9505	0.69	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 8.917)									
57.000	5.9552	0.69	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.000)									
57.083	5.9600	0.70	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.083)									
57.167	5.9649	0.70	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.167)									
57.250	5.9697	0.71	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.250)									
57.333	5.9746	0.71	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.333)									
57.417	5.9796	0.72	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.417)									
57.500	5.9846	0.72	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.500)									
57.583	5.9896	0.73	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.583)									
57.667	5.9946	0.73	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.667)									
57.750	5.9997	0.74	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.750)									
57.833	6.0048	0.74	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.833)									
57.917	6.0100	0.75	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 9.917)									
58.000	6.0152	0.76	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.000)									
58.083	6.0205	0.76	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.083)									
58.167	6.0257	0.77	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.167)									

58.250	6.0311	0.77	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.250)									
58.333	6.0365	0.78	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.333)									
58.417	6.0419	0.79	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.417)									
58.500	6.0474	0.79	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.500)									
58.583	6.0529	0.80	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.583)									
58.667	6.0584	0.81	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.667)									
58.750	6.0641	0.82	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.750)									
58.833	6.0697	0.82	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.833)									
58.917	6.0754	0.83	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 10.917)									
59.000	6.0812	0.84	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.000)									
59.083	6.0870	0.85	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.083)									
59.167	6.0929	0.85	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.167)									
59.250	6.0988	0.86	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.250)									
59.333	6.1048	0.87	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.333)									
59.417	6.1109	0.88	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.417)									
59.500	6.1170	0.89	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.500)									
59.583	6.1232	0.90	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.583)									
59.667	6.1294	0.91	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.667)									
59.750	6.1358	0.92	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.750)									
59.833	6.1421	0.93	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.833)									
59.917	6.1486	0.94	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 11.917)									
60.000	6.1551	0.95	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.000)									
60.083	6.1617	0.96	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.083)									
60.167	6.1685	0.98	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.167)									
60.250	6.1755	1.01	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.250)									
60.333	6.1828	1.06	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.333)									
60.417	6.1904	1.10	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.417)									
60.500	6.1983	1.15	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.500)									
60.583	6.2066	1.20	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.583)									
60.667	6.2151	1.24	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.667)									
60.750	6.2238	1.27	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.750)									
60.833	6.2328	1.30	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.833)									
60.917	6.2419	1.32	Q	.	.	.	.	.	.
(PEAK DAY 3, HOUR 12.917)									
61.000	6.2511	1.35	Q	.	.	.	.	.	.

(PEAK DAY 3, HOUR 13.000)					
61.083	6.2606	1.37	Q	.	.
(PEAK DAY 3, HOUR 13.083)					
61.167	6.2701	1.39	Q	.	.
(PEAK DAY 3, HOUR 13.167)					
61.250	6.2799	1.41	Q	.	.
(PEAK DAY 3, HOUR 13.250)					
61.333	6.2897	1.43	Q	.	.
(PEAK DAY 3, HOUR 13.333)					
61.417	6.2998	1.46	Q	.	.
(PEAK DAY 3, HOUR 13.417)					
61.500	6.3099	1.48	Q	.	.
(PEAK DAY 3, HOUR 13.500)					
61.583	6.3203	1.50	Q	.	.
(PEAK DAY 3, HOUR 13.583)					
61.667	6.3308	1.53	Q	.	.
(PEAK DAY 3, HOUR 13.667)					
61.750	6.3415	1.55	Q	.	.
(PEAK DAY 3, HOUR 13.750)					
61.833	6.3524	1.58	Q	.	.
(PEAK DAY 3, HOUR 13.833)					
61.917	6.3634	1.60	Q	.	.
(PEAK DAY 3, HOUR 13.917)					
62.000	6.3747	1.63	Q	.	.
(PEAK DAY 3, HOUR 14.000)					
62.083	6.3861	1.66	Q	.	.
(PEAK DAY 3, HOUR 14.083)					
62.167	6.3978	1.70	Q	.	.
(PEAK DAY 3, HOUR 14.167)					
62.250	6.4098	1.74	Q	.	.
(PEAK DAY 3, HOUR 14.250)					
62.333	6.4221	1.79	Q	.	.
(PEAK DAY 3, HOUR 14.333)					
62.417	6.4347	1.84	Q	.	.
(PEAK DAY 3, HOUR 14.417)					
62.500	6.4478	1.89	Q	.	.
(PEAK DAY 3, HOUR 14.500)					
62.583	6.4611	1.94	Q	.	.
(PEAK DAY 3, HOUR 14.583)					
62.667	6.4749	2.00	Q	.	.
(PEAK DAY 3, HOUR 14.667)					
62.750	6.4890	2.05	Q	.	.
(PEAK DAY 3, HOUR 14.750)					
62.833	6.5036	2.11	Q	.	.
(PEAK DAY 3, HOUR 14.833)					
62.917	6.5185	2.17	Q	.	.
(PEAK DAY 3, HOUR 14.917)					
63.000	6.5338	2.23	Q	.	.
(PEAK DAY 3, HOUR 15.000)					
63.083	6.5496	2.29	Q	.	.
(PEAK DAY 3, HOUR 15.083)					
63.167	6.5659	2.37	Q	.	.
(PEAK DAY 3, HOUR 15.167)					
63.250	6.5828	2.44	Q	.	.
(PEAK DAY 3, HOUR 15.250)					
63.333	6.6002	2.53	Q	.	.
(PEAK DAY 3, HOUR 15.333)					
63.417	6.6182	2.62	Q	.	.
(PEAK DAY 3, HOUR 15.417)					
63.500	6.6369	2.71	Q	.	.
(PEAK DAY 3, HOUR 15.500)					
63.583	6.6561	2.79	Q	.	.
(PEAK DAY 3, HOUR 15.583)					
63.667	6.6759	2.87	Q	.	.
(PEAK DAY 3, HOUR 15.667)					
63.750	6.6985	3.28	Q	.	.
(PEAK DAY 3, HOUR 15.750)					

63.833	6.7294	4.50	Q	.	.
(PEAK DAY 3, HOUR 15.833)					
63.917	6.7842	7.95	Q	.	.
(PEAK DAY 3, HOUR 15.917)					
64.000	6.8926	15.75	Q	.	.
(PEAK DAY 3, HOUR 16.000)					
64.083	7.1542	37.99	VQ	.	.
(PEAK DAY 3, HOUR 16.083)					
64.167	7.6461	71.42	V Q	.	.
(PEAK DAY 3, HOUR 16.167)					
64.250	8.4198	112.35	.V Q	.	.
(PEAK DAY 3, HOUR 16.250)					
64.333	9.4488	149.41	.V Q	.	.
(PEAK DAY 3, HOUR 16.333)					
64.417	10.5824	164.60	.V Q	.	.
(PEAK DAY 3, HOUR 16.417)					
64.500	11.7966	176.30	.V Q	.	.
(PEAK DAY 3, HOUR 16.500)					
64.583	12.7970	145.26	.V Q	.	.
(PEAK DAY 3, HOUR 16.583)					
64.667	13.5493	109.23	.V Q	.	.
(PEAK DAY 3, HOUR 16.667)					
64.750	14.1013	80.15	.VQ	.	.
(PEAK DAY 3, HOUR 16.750)					
64.833	14.5075	58.97	.Q	.	.
(PEAK DAY 3, HOUR 16.833)					
64.917	14.8101	43.94	.Q	.	.
(PEAK DAY 3, HOUR 16.917)					
65.000	15.0456	34.20	QV	.	.
(PEAK DAY 3, HOUR 17.000)					
65.083	15.2267	26.29	QV	.	.
(PEAK DAY 3, HOUR 17.083)					
65.167	15.3661	20.25	QV	.	.
(PEAK DAY 3, HOUR 17.167)					
65.250	15.4781	16.27	QV	.	.
(PEAK DAY 3, HOUR 17.250)					
65.333	15.5793	14.68	QV	.	.
(PEAK DAY 3, HOUR 17.333)					
65.417	15.6712	13.35	QV	.	.
(PEAK DAY 3, HOUR 17.417)					
65.500	15.7543	12.06	QV	.	.
(PEAK DAY 3, HOUR 17.500)					
65.583	15.8297	10.96	QV	.	.
(PEAK DAY 3, HOUR 17.583)					
65.667	15.8920	9.04	QV	.	.
(PEAK DAY 3, HOUR 17.667)					
65.750	15.9435	7.49	QV	.	.
(PEAK DAY 3, HOUR 17.750)					
65.833	15.9913	6.94	QV	.	.
(PEAK DAY 3, HOUR 17.833)					
65.917	16.0345	6.27	Q V	.	.
(PEAK DAY 3, HOUR 17.917)					
66.000	16.0729	5.58	Q V	.	.
(PEAK DAY 3, HOUR 18.000)					
66.083	16.1082	5.13	Q V	.	.
(PEAK DAY 3, HOUR 18.083)					
66.167	16.1414	4.81	Q V	.	.
(PEAK DAY 3, HOUR 18.167)					
66.250	16.1734	4.65	Q V	.	.
(PEAK DAY 3, HOUR 18.250)					
66.333	16.2040	4.43	Q V	.	.
(PEAK DAY 3, HOUR 18.333)					
66.417	16.2325	4.14	Q V	.	.
(PEAK DAY 3, HOUR 18.417)					
66.500	16.2591	3.85	Q V	.	.
(PEAK DAY 3, HOUR 18.500)					
66.583	16.2844	3.67	Q V	.	.

(PEAK DAY 3, HOUR 18.583)									
66.667	16.3089	3.56	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 18.667)									
66.750	16.3326	3.45	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 18.750)									
66.833	16.3550	3.24	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 18.833)									
66.917	16.3744	2.82	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 18.917)									
67.000	16.3926	2.64	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.000)									
67.083	16.4103	2.58	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.083)									
67.167	16.4275	2.50	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.167)									
67.250	16.4437	2.35	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.250)									
67.333	16.4595	2.30	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.333)									
67.417	16.4751	2.27	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.417)									
67.500	16.4905	2.23	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.500)									
67.583	16.5054	2.17	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.583)									
67.667	16.5195	2.04	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.667)									
67.750	16.5324	1.87	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.750)									
67.833	16.5446	1.78	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.833)									
67.917	16.5567	1.75	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 19.917)									
68.000	16.5684	1.71	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.000)									
68.083	16.5797	1.64	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.083)									
68.167	16.5899	1.48	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.167)									
68.250	16.5985	1.24	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.250)									
68.333	16.6054	1.00	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.333)									
68.417	16.6116	0.91	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.417)									
68.500	16.6177	0.89	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.500)									
68.583	16.6237	0.88	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.583)									
68.667	16.6297	0.86	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.667)									
68.750	16.6356	0.86	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.750)									
68.833	16.6414	0.84	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.833)									
68.917	16.6472	0.84	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 20.917)									
69.000	16.6528	0.83	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.000)									
69.083	16.6585	0.82	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.083)									
69.167	16.6640	0.81	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.167)									
69.250	16.6696	0.80	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.250)									
69.333	16.6750	0.79	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.333)									

69.417	16.6804	0.78	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.417)									
69.500	16.6858	0.78	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.500)									
69.583	16.6911	0.77	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.583)									
69.667	16.6963	0.76	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.667)									
69.750	16.7015	0.76	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.750)									
69.833	16.7067	0.75	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.833)									
69.917	16.7118	0.74	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 21.917)									
70.000	16.7169	0.74	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.000)									
70.083	16.7219	0.73	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.083)									
70.167	16.7269	0.72	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.167)									
70.250	16.7319	0.72	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.250)									
70.333	16.7368	0.71	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.333)									
70.417	16.7416	0.70	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.417)									
70.500	16.7463	0.69	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.500)									
70.583	16.7509	0.66	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.583)									
70.667	16.7549	0.58	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.667)									
70.750	16.7585	0.53	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.750)									
70.833	16.7621	0.52	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.833)									
70.917	16.7657	0.52	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 22.917)									
71.000	16.7692	0.51	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.000)									
71.083	16.7727	0.51	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.083)									
71.167	16.7762	0.50	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.167)									
71.250	16.7796	0.50	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.250)									
71.333	16.7830	0.50	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.333)									
71.417	16.7864	0.49	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.417)									
71.500	16.7898	0.49	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.500)									
71.583	16.7931	0.48	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.583)									
71.667	16.7964	0.48	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.667)									
71.750	16.7997	0.48	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.750)									
71.833	16.8029	0.47	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.833)									
71.917	16.8062	0.47	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 23.917)									
72.000	16.8094	0.46	Q V	.	.	.	.	.	.
(PEAK DAY 3, HOUR 24.000)									
72.083	16.8131	0.54	Q V	.	.	.	.	.	.
(PEAK DAY 2, HOUR 0.083)									
72.167	16.8184	0.77	Q V	.	.	.	.	.	.

(PEAK DAY 2, HOUR 0.167)									
72.250	16.8267	1.21	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.250)									
72.333	16.8396	1.87	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.333)									
72.417	16.8577	2.62	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.417)									
72.500	16.8819	3.52	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.500)									
72.583	16.9113	4.27	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.583)									
72.667	16.9445	4.82	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.667)									
72.750	16.9806	5.23	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.750)									
72.833	17.0187	5.53	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.833)									
72.917	17.0583	5.75	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 0.917)									
73.000	17.0991	5.93	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.000)									
73.083	17.1410	6.07	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.083)									
73.167	17.1835	6.18	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.167)									
73.250	17.2267	6.26	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.250)									
73.333	17.2704	6.35	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.333)									
73.417	17.3146	6.42	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.417)									
73.500	17.3593	6.49	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.500)									
73.583	17.4045	6.56	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.583)									
73.667	17.4500	6.62	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.667)									
73.750	17.4959	6.67	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.750)									
73.833	17.5422	6.71	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.833)									
73.917	17.5887	6.76	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 1.917)									
74.000	17.6356	6.80	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.000)									
74.083	17.6827	6.84	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.083)									
74.167	17.7301	6.88	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.167)									
74.250	17.7778	6.92	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.250)									
74.333	17.8258	6.96	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.333)									
74.417	17.8740	7.00	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.417)									
74.500	17.9225	7.04	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.500)									
74.583	17.9712	7.08	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.583)									
74.667	18.0202	7.11	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.667)									
74.750	18.0695	7.15	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.750)									
74.833	18.1190	7.19	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.833)									
74.917	18.1687	7.23	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 2.917)									

75.000	18.2187	7.26	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.000)									
75.083	18.2690	7.30	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.083)									
75.167	18.3195	7.33	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.167)									
75.250	18.3702	7.37	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.250)									
75.333	18.4212	7.40	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.333)									
75.417	18.4724	7.44	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.417)									
75.500	18.5239	7.47	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.500)									
75.583	18.5756	7.51	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.583)									
75.667	18.6275	7.54	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.667)									
75.750	18.6798	7.58	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.750)									
75.833	18.7322	7.62	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.833)									
75.917	18.7849	7.65	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 3.917)									
76.000	18.8378	7.69	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.000)									
76.083	18.8910	7.72	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.083)									
76.167	18.9445	7.76	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.167)									
76.250	18.9981	7.79	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.250)									
76.333	19.0521	7.83	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.333)									
76.417	19.1062	7.86	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.417)									
76.500	19.1606	7.90	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.500)									
76.583	19.2152	7.93	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.583)									
76.667	19.2701	7.97	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.667)									
76.750	19.3252	8.00	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.750)									
76.833	19.3806	8.04	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.833)									
76.917	19.4362	8.08	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 4.917)									
77.000	19.4921	8.11	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.000)									
77.083	19.5482	8.15	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.083)									
77.167	19.6046	8.19	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.167)									
77.250	19.6612	8.23	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.250)									
77.333	19.7182	8.26	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.333)									
77.417	19.7753	8.30	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.417)									
77.500	19.8328	8.34	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.500)									
77.583	19.8905	8.38	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.583)									
77.667	19.9486	8.42	Q	V	.	.	.	.	.
(PEAK DAY 2, HOUR 5.667)									
77.750	20.0069	8.47	Q	V	.	.	.	.	.

(PEAK DAY 2, HOUR 22.500)					
94.583	81.1493	8.57	Q	V	.
(PEAK DAY 2, HOUR 22.583)					.
94.667	81.2065	8.31	Q	V	.
(PEAK DAY 2, HOUR 22.667)					.
94.750	81.2624	8.12	Q	V	.
(PEAK DAY 2, HOUR 22.750)					.
94.833	81.3177	8.02	Q	V	.
(PEAK DAY 2, HOUR 22.833)					.
94.917	81.3723	7.94	Q	V	.
(PEAK DAY 2, HOUR 22.917)					.
95.000	81.4265	7.86	Q	V	.
(PEAK DAY 2, HOUR 23.000)					.
95.083	81.4800	7.78	Q	V	.
(PEAK DAY 2, HOUR 23.083)					.
95.167	81.5331	7.71	Q	V	.
(PEAK DAY 2, HOUR 23.167)					.
95.250	81.5857	7.64	Q	V	.
(PEAK DAY 2, HOUR 23.250)					.
95.333	81.6378	7.57	Q	V	.
(PEAK DAY 2, HOUR 23.333)					.
95.417	81.6895	7.50	Q	V	.
(PEAK DAY 2, HOUR 23.417)					.
95.500	81.7408	7.44	Q	V	.
(PEAK DAY 2, HOUR 23.500)					.
95.583	81.7916	7.38	Q	V	.
(PEAK DAY 2, HOUR 23.583)					.
95.667	81.8421	7.32	Q	V	.
(PEAK DAY 2, HOUR 23.667)					.
95.750	81.8921	7.27	Q	V	.
(PEAK DAY 2, HOUR 23.750)					.
95.833	81.9418	7.21	Q	V	.
(PEAK DAY 2, HOUR 23.833)					.
95.917	81.9911	7.16	Q	V	.
(PEAK DAY 2, HOUR 23.917)					.
96.000	82.0400	7.11	Q	V	.
(PEAK DAY 2, HOUR 24.000)					.
96.083	82.0910	7.40	Q	V	.
(PEAK DAY 1, HOUR 0.083)					.
96.167	82.1481	8.30	Q	V	.
(PEAK DAY 1, HOUR 0.167)					.
96.250	82.2177	10.09	Q	V	.
(PEAK DAY 1, HOUR 0.250)					.
96.333	82.3059	12.81	Q	V	.
(PEAK DAY 1, HOUR 0.333)					.
96.417	82.4156	15.92	Q	V	.
(PEAK DAY 1, HOUR 0.417)					.
96.500	82.5510	19.66	Q	V	.
(PEAK DAY 1, HOUR 0.500)					.
96.583	82.7077	22.75	Q	V	.
(PEAK DAY 1, HOUR 0.583)					.
96.667	82.8803	25.06	Q	V	.
(PEAK DAY 1, HOUR 0.667)					.
96.750	83.0645	26.76	Q	V	.
(PEAK DAY 1, HOUR 0.750)					.
96.833	83.2574	28.01	Q	V	.
(PEAK DAY 1, HOUR 0.833)					.
96.917	83.4568	28.94	Q	V	.
(PEAK DAY 1, HOUR 0.917)					.
97.000	83.6613	29.69	Q	V	.
(PEAK DAY 1, HOUR 1.000)					.
97.083	83.8698	30.28	Q	V	.
(PEAK DAY 1, HOUR 1.083)					.
97.167	84.0815	30.74	Q	V	.
(PEAK DAY 1, HOUR 1.167)					.
97.250	84.2958	31.11	Q	V	.
(PEAK DAY 1, HOUR 1.250)					.

97.333	84.5124	31.45	Q	V	.
(PEAK DAY 1, HOUR 1.333)					.
97.417	84.7313	31.78	Q	V	.
(PEAK DAY 1, HOUR 1.417)					.
97.500	84.9522	32.09	Q	V	.
(PEAK DAY 1, HOUR 1.500)					.
97.583	85.1753	32.38	Q	V	.
(PEAK DAY 1, HOUR 1.583)					.
97.667	85.4001	32.64	Q	V	.
(PEAK DAY 1, HOUR 1.667)					.
97.750	85.6264	32.86	Q	V	.
(PEAK DAY 1, HOUR 1.750)					.
97.833	85.8541	33.08	Q	V	.
(PEAK DAY 1, HOUR 1.833)					.
97.917	86.0834	33.28	Q	V	.
(PEAK DAY 1, HOUR 1.917)					.
98.000	86.3139	33.48	Q	V	.
(PEAK DAY 1, HOUR 2.000)					.
98.083	86.5457	33.66	Q	V	.
(PEAK DAY 1, HOUR 2.083)					.
98.167	86.7788	33.84	Q	V	.
(PEAK DAY 1, HOUR 2.167)					.
98.250	87.0131	34.02	Q	V	.
(PEAK DAY 1, HOUR 2.250)					.
98.333	87.2487	34.21	Q	V	.
(PEAK DAY 1, HOUR 2.333)					.
98.417	87.4855	34.38	Q	V	.
(PEAK DAY 1, HOUR 2.417)					.
98.500	87.7235	34.56	Q	V	.
(PEAK DAY 1, HOUR 2.500)					.
98.583	87.9627	34.73	Q	V	.
(PEAK DAY 1, HOUR 2.583)					.
98.667	88.2031	34.91	Q	.V	.
(PEAK DAY 1, HOUR 2.667)					.
98.750	88.4448	35.08	.Q	.V	.
(PEAK DAY 1, HOUR 2.750)					.
98.833	88.6876	35.26	.Q	.V	.
(PEAK DAY 1, HOUR 2.833)					.
98.917	88.9316	35.43	.Q	.V	.
(PEAK DAY 1, HOUR 2.917)					.
99.000	89.1767	35.59	.Q	.V	.
(PEAK DAY 1, HOUR 3.000)					.
99.083	89.4230	35.76	.Q	.V	.
(PEAK DAY 1, HOUR 3.083)					.
99.167	89.6704	35.93	.Q	.V	.
(PEAK DAY 1, HOUR 3.167)					.
99.250	89.9190	36.09	.Q	.V	.
(PEAK DAY 1, HOUR 3.250)					.
99.333	90.1687	36.26	.Q	.V	.
(PEAK DAY 1, HOUR 3.333)					.
99.417	90.4196	36.43	.Q	.V	.
(PEAK DAY 1, HOUR 3.417)					.
99.500	90.6716	36.60	.Q	.V	.
(PEAK DAY 1, HOUR 3.500)					.
99.583	90.9248	36.77	.Q	.V	.
(PEAK DAY 1, HOUR 3.583)					.
99.667	91.1793	36.94	.Q	.V	.
(PEAK DAY 1, HOUR 3.667)					.
99.750	91.4348	37.11	.Q	.V	.
(PEAK DAY 1, HOUR 3.750)					.
99.833	91.6916	37.28	.Q	.V	.
(PEAK DAY 1, HOUR 3.833)					.
99.917	91.9495	37.45	.Q	.V	.
(PEAK DAY 1, HOUR 3.917)					.
100.000	92.2086	37.62	.Q	.V	.
(PEAK DAY 1, HOUR 4.000)					.
100.083	92.4689	37.80	.Q	.V	.

(PEAK DAY 1, HOUR 4.083)					
100.167	92.7304	37.97	.Q	.V	.
(PEAK DAY 1, HOUR 4.167)					
100.250	92.9930	38.14	.Q	.V	.
(PEAK DAY 1, HOUR 4.250)					
100.333	93.2569	38.31	.Q	.V	.
(PEAK DAY 1, HOUR 4.333)					
100.417	93.5218	38.47	.Q	.V	.
(PEAK DAY 1, HOUR 4.417)					
100.500	93.7879	38.64	.Q	.V	.
(PEAK DAY 1, HOUR 4.500)					
100.583	94.0552	38.81	.Q	.V	.
(PEAK DAY 1, HOUR 4.583)					
100.667	94.3237	38.98	.Q	.V	.
(PEAK DAY 1, HOUR 4.667)					
100.750	94.5934	39.16	.Q	.V	.
(PEAK DAY 1, HOUR 4.750)					
100.833	94.8643	39.33	.Q	.V	.
(PEAK DAY 1, HOUR 4.833)					
100.917	95.1364	39.51	.Q	.V	.
(PEAK DAY 1, HOUR 4.917)					
101.000	95.4097	39.69	.Q	.V	.
(PEAK DAY 1, HOUR 5.000)					
101.083	95.6843	39.87	.Q	.V	.
(PEAK DAY 1, HOUR 5.083)					
101.167	95.9602	40.06	.Q	.V	.
(PEAK DAY 1, HOUR 5.167)					
101.250	96.2373	40.24	.Q	.V	.
(PEAK DAY 1, HOUR 5.250)					
101.333	96.5158	40.43	.Q	.V	.
(PEAK DAY 1, HOUR 5.333)					
101.417	96.7955	40.62	.Q	.V	.
(PEAK DAY 1, HOUR 5.417)					
101.500	97.0766	40.82	.Q	.V	.
(PEAK DAY 1, HOUR 5.500)					
101.583	97.3591	41.01	.Q	.V	.
(PEAK DAY 1, HOUR 5.583)					
101.667	97.6429	41.21	.Q	.V	.
(PEAK DAY 1, HOUR 5.667)					
101.750	97.9281	41.41	.Q	.V	.
(PEAK DAY 1, HOUR 5.750)					
101.833	98.2146	41.61	.Q	.V	.
(PEAK DAY 1, HOUR 5.833)					
101.917	98.5026	41.82	.Q	.V	.
(PEAK DAY 1, HOUR 5.917)					
102.000	98.7921	42.02	.Q	.V	.
(PEAK DAY 1, HOUR 6.000)					
102.083	99.0829	42.23	.Q	.V	.
(PEAK DAY 1, HOUR 6.083)					
102.167	99.3753	42.45	.Q	.V	.
(PEAK DAY 1, HOUR 6.167)					
102.250	99.6691	42.66	.Q	.V	.
(PEAK DAY 1, HOUR 6.250)					
102.333	99.9644	42.88	.Q	.V	.
(PEAK DAY 1, HOUR 6.333)					
102.417	100.2613	43.10	.Q	.V	.
(PEAK DAY 1, HOUR 6.417)					
102.500	100.5597	43.33	.Q	.V	.
(PEAK DAY 1, HOUR 6.500)					
102.583	100.8597	43.56	.Q	.V	.
(PEAK DAY 1, HOUR 6.583)					
102.667	101.1612	43.79	.Q	.V	.
(PEAK DAY 1, HOUR 6.667)					
102.750	101.4644	44.02	.Q	.V	.
(PEAK DAY 1, HOUR 6.750)					
102.833	101.7691	44.25	.Q	.V	.
(PEAK DAY 1, HOUR 6.833)					

102.917	102.0755	44.49	.Q	.V	.
(PEAK DAY 1, HOUR 6.917)					
103.000	102.3836	44.73	.Q	.V	.
(PEAK DAY 1, HOUR 7.000)					
103.083	102.6933	44.97	.Q	.V	.
(PEAK DAY 1, HOUR 7.083)					
103.167	103.0047	45.22	.Q	.V	.
(PEAK DAY 1, HOUR 7.167)					
103.250	103.3179	45.47	.Q	.V	.
(PEAK DAY 1, HOUR 7.250)					
103.333	103.6328	45.73	.Q	.V	.
(PEAK DAY 1, HOUR 7.333)					
103.417	103.9495	45.98	.Q	.V	.
(PEAK DAY 1, HOUR 7.417)					
103.500	104.2680	46.25	.Q	.V	.
(PEAK DAY 1, HOUR 7.500)					
103.583	104.5883	46.51	.Q	.V	.
(PEAK DAY 1, HOUR 7.583)					
103.667	104.9105	46.78	.Q	.V	.
(PEAK DAY 1, HOUR 7.667)					
103.750	105.2346	47.06	.Q	.V	.
(PEAK DAY 1, HOUR 7.750)					
103.833	105.5606	47.34	.Q	.V	.
(PEAK DAY 1, HOUR 7.833)					
103.917	105.8886	47.62	.Q	.V	.
(PEAK DAY 1, HOUR 7.917)					
104.000	106.2185	47.91	.Q	.V	.
(PEAK DAY 1, HOUR 8.000)					
104.083	106.5504	48.20	.Q	.V	.
(PEAK DAY 1, HOUR 8.083)					
104.167	106.8844	48.50	.Q	.V	.
(PEAK DAY 1, HOUR 8.167)					
104.250	107.2205	48.80	.Q	.V	.
(PEAK DAY 1, HOUR 8.250)					
104.333	107.5587	49.10	.Q	.V	.
(PEAK DAY 1, HOUR 8.333)					
104.417	107.8990	49.41	.Q	.V	.
(PEAK DAY 1, HOUR 8.417)					
104.500	108.2415	49.73	.Q	.V	.
(PEAK DAY 1, HOUR 8.500)					
104.583	108.5862	50.05	.Q	.V	.
(PEAK DAY 1, HOUR 8.583)					
104.667	108.9331	50.38	.Q	.V	.
(PEAK DAY 1, HOUR 8.667)					
104.750	109.2824	50.71	.Q	.V	.
(PEAK DAY 1, HOUR 8.750)					
104.833	109.6340	51.05	.Q	.V	.
(PEAK DAY 1, HOUR 8.833)					
104.917	109.9880	51.40	.Q	.V	.
(PEAK DAY 1, HOUR 8.917)					
105.000	110.3443	51.75	.Q	.V	.
(PEAK DAY 1, HOUR 9.000)					
105.083	110.7032	52.10	.Q	.V	.
(PEAK DAY 1, HOUR 9.083)					
105.167	111.0645	52.47	.Q	.V	.
(PEAK DAY 1, HOUR 9.167)					
105.250	111.4284	52.84	.Q	.V	.
(PEAK DAY 1, HOUR 9.250)					
105.333	111.7950	53.22	.Q	.V	.
(PEAK DAY 1, HOUR 9.333)					
105.417	112.1641	53.60	.Q	.V	.
(PEAK DAY 1, HOUR 9.417)					
105.500	112.5359	53.99	.Q	.V	.
(PEAK DAY 1, HOUR 9.500)					
105.583	112.9105	54.39	.Q	.V	.
(PEAK DAY 1, HOUR 9.583)					
105.667	113.2879	54.80	.Q	.V	.

(PEAK DAY 1, HOUR 26.417)									
122.500	320.4165	0.94	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 26.500)									
122.583	320.4225	0.87	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 26.583)									
122.667	320.4280	0.81	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 26.667)									
122.750	320.4331	0.74	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 26.750)									
122.833	320.4378	0.68	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 26.833)									
122.917	320.4421	0.63	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 26.917)									
123.000	320.4462	0.59	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.000)									
123.083	320.4500	0.54	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.083)									
123.167	320.4534	0.50	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.167)									
123.250	320.4566	0.46	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.250)									
123.333	320.4596	0.43	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.333)									
123.417	320.4623	0.39	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.417)									
123.500	320.4647	0.36	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.500)									
123.583	320.4669	0.32	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.583)									
123.667	320.4689	0.29	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.667)									
123.750	320.4707	0.26	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.750)									
123.833	320.4723	0.24	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.833)									
123.917	320.4738	0.21	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 27.917)									
124.000	320.4751	0.19	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.000)									
124.083	320.4762	0.16	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.083)									
124.167	320.4772	0.14	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.167)									
124.250	320.4781	0.13	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.250)									
124.333	320.4789	0.12	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.333)									
124.417	320.4797	0.11	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.417)									
124.500	320.4804	0.11	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.500)									
124.583	320.4812	0.10	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.583)									
124.667	320.4819	0.10	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.667)									
124.750	320.4825	0.10	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.750)									
124.833	320.4832	0.09	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.833)									
124.917	320.4838	0.09	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 28.917)									
125.000	320.4843	0.08	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.000)									
125.083	320.4848	0.08	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.083)									
125.167	320.4853	0.07	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.167)									

125.250	320.4858	0.07	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.250)									
125.333	320.4862	0.06	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.333)									
125.417	320.4866	0.06	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.417)									
125.500	320.4870	0.06	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.500)									
125.583	320.4873	0.05	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.583)									
125.667	320.4876	0.05	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.667)									
125.750	320.4879	0.04	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.750)									
125.833	320.4882	0.04	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.833)									
125.917	320.4884	0.03	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 29.917)									
126.000	320.4886	0.03	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 30.000)									
126.083	320.4888	0.03	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 30.083)									
126.167	320.4890	0.02	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 30.167)									
126.250	320.4891	0.02	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 30.250)									
126.333	320.4892	0.01	Q	.	.	.	.	.	V.
(PEAK DAY 1, HOUR 30.333)									
126.417	320.4893	0.01	Q	V.
(PEAK DAY 1, HOUR 30.417)									

=====

END OF FLOODSCx ROUTING ANALYSIS


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"CHAPARRAL,BROADLEAF" C 0.10 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.10 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.50 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 0.50 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.20 SUBAREA RUNOFF (CFS) = 4.72
EFFECTIVE AREA (ACRES) = 3.10 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 3.10 PEAK FLOW RATE (CFS) = 12.16
*****
FLOW PROCESS FROM NODE 1303.00 TO NODE 1304.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM (FEET) = 665.00 DOWNSTREAM (FEET) = 635.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 145.00 CHANNEL SLOPE = 0.2069
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 12.16
FLOW VELOCITY (FEET/SEC.) = 9.40 FLOW DEPTH (FEET) = 0.74
TRAVEL TIME (MIN.) = 0.26 Tc (MIN.) = 8.86
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1304.00 = 739.00 FEET.
*****
FLOW PROCESS FROM NODE 1303.00 TO NODE 1304.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc (MIN) = 8.86
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.499
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.10 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.80 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.20 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 1.00 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 0.10 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.20 SUBAREA RUNOFF (CFS) = 8.47
EFFECTIVE AREA (ACRES) = 5.30 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 5.30 PEAK FLOW RATE (CFS) = 20.42
*****
FLOW PROCESS FROM NODE 1304.00 TO NODE 1305.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM (FEET) = 635.00 DOWNSTREAM (FEET) = 605.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 176.00 CHANNEL SLOPE = 0.1705
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 20.42
FLOW VELOCITY (FEET/SEC.) = 9.74 FLOW DEPTH (FEET) = 0.76
TRAVEL TIME (MIN.) = 0.30 Tc (MIN.) = 9.16
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1305.00 = 915.00 FEET.
*****
FLOW PROCESS FROM NODE 1304.00 TO NODE 1305.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc (MIN) = 9.16
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.409

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SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 0.20 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.50 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 0.90 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 0.20 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 1.80 SUBAREA RUNOFF (CFS) = 6.81
EFFECTIVE AREA (ACRES) = 7.10 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 7.10 PEAK FLOW RATE (CFS) = 26.81
*****
FLOW PROCESS FROM NODE 1305.00 TO NODE 1306.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM (FEET) = 605.00 DOWNSTREAM (FEET) = 603.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 31.00 CHANNEL SLOPE = 0.0645
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 26.81
FLOW VELOCITY (FEET/SEC.) = 7.36 FLOW DEPTH (FEET) = 1.15
TRAVEL TIME (MIN.) = 0.07 Tc (MIN.) = 9.23
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1306.00 = 946.00 FEET.
*****
FLOW PROCESS FROM NODE 1305.00 TO NODE 1306.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc (MIN) = 9.23
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.389
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.40 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.50 0.25 1.00 77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 1.60 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 0.30 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.80 SUBAREA RUNOFF (CFS) = 10.51
EFFECTIVE AREA (ACRES) = 9.90 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 9.90 PEAK FLOW RATE (CFS) = 37.19
*****
FLOW PROCESS FROM NODE 1306.00 TO NODE 1307.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM (FEET) = 603.00 DOWNSTREAM (FEET) = 600.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 68.00 CHANNEL SLOPE = 0.0441
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 37.19
FLOW VELOCITY (FEET/SEC.) = 6.98 FLOW DEPTH (FEET) = 1.52
TRAVEL TIME (MIN.) = 0.16 Tc (MIN.) = 9.39
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1307.00 = 1014.00 FEET.
*****
FLOW PROCESS FROM NODE 1306.00 TO NODE 1307.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 9.39
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.341
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"OPEN BRUSH"          C      0.40     0.25     1.00     77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D      0.50     0.20     1.00     81
NATURAL FAIR COVER
"OPEN BRUSH"          D      3.40     0.20     1.00     83
NATURAL FAIR COVER
"WOODLAND"            D      0.10     0.20     1.00     79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 4.40 SUBAREA RUNOFF(CFS) = 16.38
EFFECTIVE AREA(ACRES) = 14.30 AREA-AVERAGED Fm(INCH/HR) = 0.21
AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 14.30 PEAK FLOW RATE(CFS) = 53.14

*****
FLOW PROCESS FROM NODE 1307.00 TO NODE 1308.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 600.00 DOWNSTREAM(FEET) = 550.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 598.00 CHANNEL SLOPE = 0.0836
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 53.14
FLOW VELOCITY(FEET/SEC.) = 9.71 FLOW DEPTH(FEET) = 1.54
TRAVEL TIME(MIN.) = 1.03 Tc(MIN.) = 10.42
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1308.00 = 1612.00 FEET.

*****
FLOW PROCESS FROM NODE 1307.00 TO NODE 1308.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 10.42
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.077
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"OPEN BRUSH"          C      0.60     0.25     1.00     77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D      1.40     0.20     1.00     81
NATURAL FAIR COVER
"OPEN BRUSH"          D      3.80     0.20     1.00     83
NATURAL FAIR COVER
"WOODLAND"            D      1.00     0.20     1.00     79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 6.80 SUBAREA RUNOFF(CFS) = 23.70
EFFECTIVE AREA(ACRES) = 21.10 AREA-AVERAGED Fm(INCH/HR) = 0.21
AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 21.10 PEAK FLOW RATE(CFS) = 73.44

*****
FLOW PROCESS FROM NODE 1308.00 TO NODE 1309.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 550.00 DOWNSTREAM(FEET) = 490.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 952.00 CHANNEL SLOPE = 0.0630
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 73.44
FLOW VELOCITY(FEET/SEC.) = 9.49 FLOW DEPTH(FEET) = 1.96
TRAVEL TIME(MIN.) = 1.67 Tc(MIN.) = 12.09
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1309.00 = 2564.00 FEET.

*****
FLOW PROCESS FROM NODE 1308.00 TO NODE 1309.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 12.09
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.742
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B      0.10     0.30     1.00     63
NATURAL FAIR COVER
"OPEN BRUSH"          B      0.10     0.30     1.00     66
NATURAL FAIR COVER
"WOODLAND"            B      0.20     0.30     1.00     60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      0.10     0.25     1.00     75
NATURAL FAIR COVER
"OPEN BRUSH"          C      0.80     0.25     1.00     77
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D      4.70     0.20     1.00     81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 6.00 SUBAREA RUNOFF(CFS) = 19.05
EFFECTIVE AREA(ACRES) = 27.10 AREA-AVERAGED Fm(INCH/HR) = 0.21
AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 27.10 PEAK FLOW RATE(CFS) = 86.15

*****
FLOW PROCESS FROM NODE 1308.00 TO NODE 1309.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 12.09
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.742
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"OPEN BRUSH"          D      3.50     0.20     1.00     83
NATURAL FAIR COVER
"WOODLAND"            D      1.60     0.20     1.00     79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 5.10 SUBAREA RUNOFF(CFS) = 16.26
EFFECTIVE AREA(ACRES) = 32.20 AREA-AVERAGED Fm(INCH/HR) = 0.21
AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 32.20 PEAK FLOW RATE(CFS) = 102.41

*****
FLOW PROCESS FROM NODE 1309.00 TO NODE 1310.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 490.00 DOWNSTREAM(FEET) = 485.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 83.00 CHANNEL SLOPE = 0.0602
CHANNEL BASE(FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
CHANNEL FLOW THRU SUBAREA(CFS) = 102.41
FLOW VELOCITY(FEET/SEC.) = 10.11 FLOW DEPTH(FEET) = 2.02
TRAVEL TIME(MIN.) = 0.14 Tc(MIN.) = 12.22
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1310.00 = 2647.00 FEET.

*****
FLOW PROCESS FROM NODE 1309.00 TO NODE 1310.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 12.22
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.715
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE              GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B      1.80     0.30     1.00     63
NATURAL FAIR COVER
"WOODLAND"            B      0.20     0.30     1.00     60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      8.00     0.25     1.00     75

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NATURAL FAIR COVER
"OPEN BRUSH"      C      8.90  0.25  1.00  77
NATURAL FAIR COVER
"WOODLAND"       C      2.40  0.25  1.00  73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D    22.50  0.20  1.00  81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 43.80 SUBAREA RUNOFF (CFS) = 137.51
EFFECTIVE AREA (ACRES) = 76.00 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 76.00 PEAK FLOW RATE (CFS) = 239.13

*****
FLOW PROCESS FROM NODE 1309.00 TO NODE 1310.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 12.22
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.715
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"      D      2.10  0.20  1.00  83
NATURAL FAIR COVER
"WOODLAND"       D      2.20  0.20  1.00  79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 4.30 SUBAREA RUNOFF (CFS) = 13.60
EFFECTIVE AREA (ACRES) = 80.30 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 80.30 PEAK FLOW RATE (CFS) = 252.73

*****
FLOW PROCESS FROM NODE 1310.00 TO NODE 1311.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 485.00 DOWNSTREAM (FEET) = 480.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 108.00 CHANNEL SLOPE = 0.0463
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 252.73
FLOW VELOCITY (FEET/SEC.) = 11.48 FLOW DEPTH (FEET) = 3.10
TRAVEL TIME (MIN.) = 0.16 Tc (MIN.) = 12.38
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1311.00 = 2755.00 FEET.

*****
FLOW PROCESS FROM NODE 1310.00 TO NODE 1311.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 12.38
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.684
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"          B      0.20  0.30  1.00  69
NATURAL FAIR COVER
"OPEN BRUSH"     B      0.40  0.30  1.00  66
NATURAL FAIR COVER
"WOODLAND"       B      0.10  0.30  1.00  60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C    12.10  0.25  1.00  75
NATURAL FAIR COVER
"OPEN BRUSH"     C      0.60  0.25  1.00  77
NATURAL FAIR COVER
"WOODLAND"       C      2.60  0.25  1.00  73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 16.00 SUBAREA RUNOFF (CFS) = 49.41
EFFECTIVE AREA (ACRES) = 96.30 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 96.30 PEAK FLOW RATE (CFS) = 299.88

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*****
FLOW PROCESS FROM NODE 1310.00 TO NODE 1311.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 12.38
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.684
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D    14.50  0.20  1.00  81
NATURAL FAIR COVER
"OPEN BRUSH"       D      6.90  0.20  1.00  83
NATURAL FAIR COVER
"WOODLAND"         D      2.30  0.20  1.00  79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 23.70 SUBAREA RUNOFF (CFS) = 74.31
EFFECTIVE AREA (ACRES) = 120.00 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 120.00 PEAK FLOW RATE (CFS) = 374.18

*****
FLOW PROCESS FROM NODE 1311.00 TO NODE 1312.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 480.00 DOWNSTREAM (FEET) = 445.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 925.00 CHANNEL SLOPE = 0.0378
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 374.18
FLOW VELOCITY (FEET/SEC.) = 11.78 FLOW DEPTH (FEET) = 3.98
TRAVEL TIME (MIN.) = 1.31 Tc (MIN.) = 13.69
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1312.00 = 3680.00 FEET.

*****
FLOW PROCESS FROM NODE 1311.00 TO NODE 1312.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 13.69
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.489
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"          B      2.70  0.30  1.00  69
NATURAL FAIR COVER
"OPEN BRUSH"     B      0.60  0.30  1.00  66
NATURAL FAIR COVER
"WOODLAND"       B      0.40  0.30  1.00  60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C    8.70  0.25  1.00  75
NATURAL FAIR COVER
"GRASS"          C      0.40  0.25  1.00  79
NATURAL FAIR COVER
"OPEN BRUSH"     C      3.90  0.25  1.00  77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 16.70 SUBAREA RUNOFF (CFS) = 48.51
EFFECTIVE AREA (ACRES) = 136.70 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 136.70 PEAK FLOW RATE (CFS) = 401.63

*****
FLOW PROCESS FROM NODE 1311.00 TO NODE 1312.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 13.69
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.489
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER

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"WOODLAND" C 3.00 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.60 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 4.10 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 7.70 SUBAREA RUNOFF (CFS) = 22.66
EFFECTIVE AREA (ACRES) = 144.40 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 144.40 PEAK FLOW RATE (CFS) = 424.29

*****
FLOW PROCESS FROM NODE 1312.00 TO NODE 1313.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 445.00 DOWNSTREAM (FEET) = 440.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 154.00 CHANNEL SLOPE = 0.0325
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 424.29
FLOW VELOCITY (FEET/SEC.) = 11.46 FLOW DEPTH (FEET) = 4.08
TRAVEL TIME (MIN.) = 0.22 Tc (MIN.) = 13.91
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1313.00 = 3834.00 FEET.

*****
FLOW PROCESS FROM NODE 1312.00 TO NODE 1313.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 13.91
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.456
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 0.20 0.30 1.00 63
NATURAL FAIR COVER
"GRASS" B 0.90 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 1.60 0.30 1.00 66
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 31.60 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 2.20 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 11.70 0.25 1.00 77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 48.20 SUBAREA RUNOFF (CFS) = 138.97
EFFECTIVE AREA (ACRES) = 192.60 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 192.60 PEAK FLOW RATE (CFS) = 559.06

*****
FLOW PROCESS FROM NODE 1312.00 TO NODE 1313.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 13.91
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.456
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" C 1.10 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 31.80 0.20 1.00 81
NATURAL FAIR COVER
"GRASS" D 0.20 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 17.60 0.20 1.00 83
NATURAL FAIR COVER
"WOODLAND" D 7.30 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00

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SUBAREA AREA (ACRES) = 58.00 SUBAREA RUNOFF (CFS) = 169.93
EFFECTIVE AREA (ACRES) = 250.60 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 250.60 PEAK FLOW RATE (CFS) = 729.00

*****
FLOW PROCESS FROM NODE 1313.00 TO NODE 1314.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 440.00 DOWNSTREAM (FEET) = 430.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1175.00 CHANNEL SLOPE = 0.0085
CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00
CHANNEL FLOW THRU SUBAREA (CFS) = 729.00
FLOW VELOCITY (FEET/SEC.) = 7.95 FLOW DEPTH (FEET) = 6.69
TRAVEL TIME (MIN.) = 2.46 Tc (MIN.) = 16.38
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1314.00 = 5009.00 FEET.

*****
FLOW PROCESS FROM NODE 1313.00 TO NODE 1314.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 16.38
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.146
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 4.60 0.30 1.00 63
NATURAL FAIR COVER
"GRASS" B 2.00 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 0.70 0.30 1.00 66
NATURAL FAIR COVER
"WOODLAND" B 0.90 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 8.30 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.80 0.25 1.00 77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 17.30 SUBAREA RUNOFF (CFS) = 44.72
EFFECTIVE AREA (ACRES) = 267.90 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 267.90 PEAK FLOW RATE (CFS) = 729.00
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1313.00 TO NODE 1314.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 16.38
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.146
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" C 1.10 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 5.30 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 5.30 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 11.70 SUBAREA RUNOFF (CFS) = 30.97
EFFECTIVE AREA (ACRES) = 279.60 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 279.60 PEAK FLOW RATE (CFS) = 734.65

*****
FLOW PROCESS FROM NODE 1314.00 TO NODE 1315.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

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ELEVATION DATA: UPSTREAM(FEET) = 430.00 DOWNSTREAM(FEET) = 385.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1086.00 CHANNEL SLOPE = 0.0414
CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00
CHANNEL FLOW THRU SUBAREA(CFS) = 734.65
FLOW VELOCITY(FEET/SEC.) = 14.34 FLOW DEPTH(FEET) = 4.47
TRAVEL TIME(MIN.) = 1.26 Tc(MIN.) = 17.64
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1315.00 = 6095.00 FEET.

FLOW PROCESS FROM NODE 1314.00 TO NODE 1315.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 17.64
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.008
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 21.00 0.30 1.00 63
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 24.90 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 4.30 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 0.20 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 35.40 0.20 1.00 81
NATURAL FAIR COVER
"OPEN BRUSH" D 4.10 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 89.90 SUBAREA RUNOFF(CFS) = 223.96
EFFECTIVE AREA(ACRES) = 369.50 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 369.50 PEAK FLOW RATE(CFS) = 923.87

FLOW PROCESS FROM NODE 1315.00 TO NODE 1316.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 385.00 DOWNSTREAM(FEET) = 342.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1883.00 CHANNEL SLOPE = 0.0228
CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00
CHANNEL FLOW THRU SUBAREA(CFS) = 923.87
FLOW VELOCITY(FEET/SEC.) = 12.20 FLOW DEPTH(FEET) = 5.88
TRAVEL TIME(MIN.) = 2.57 Tc(MIN.) = 20.21
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1316.00 = 7978.00 FEET.

FLOW PROCESS FROM NODE 1315.00 TO NODE 1316.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 20.21
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.784
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" A 12.40 0.40 1.00 40
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 28.30 0.30 1.00 63
NATURAL FAIR COVER
"GRASS" B 3.30 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 8.20 0.30 1.00 66
NATURAL FAIR COVER
"WOODLAND" B 0.40 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 51.00 0.25 1.00 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00

SUBAREA AREA(ACRES) = 103.60 SUBAREA RUNOFF(CFS) = 232.78
EFFECTIVE AREA(ACRES) = 473.10 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 473.10 PEAK FLOW RATE(CFS) = 1082.22

FLOW PROCESS FROM NODE 1315.00 TO NODE 1316.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 20.21
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.784
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 5.50 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 58.60 0.25 1.00 77
NATURAL FAIR COVER
"WOODLAND" C 4.70 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 2.10 0.20 1.00 81
NATURAL FAIR COVER
"GRASS" D 2.20 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 1.40 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 74.50 SUBAREA RUNOFF(CFS) = 170.16
EFFECTIVE AREA(ACRES) = 547.60 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 547.60 PEAK FLOW RATE(CFS) = 1252.38

FLOW PROCESS FROM NODE 1316.00 TO NODE 1317.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 342.00 DOWNSTREAM(FEET) = 324.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1105.00 CHANNEL SLOPE = 0.0163
CHANNEL BASE(FEET) = 8.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 8.00
CHANNEL FLOW THRU SUBAREA(CFS) = 1252.38
FLOW VELOCITY(FEET/SEC.) = 11.61 FLOW DEPTH(FEET) = 7.13
TRAVEL TIME(MIN.) = 1.59 Tc(MIN.) = 21.80
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1317.00 = 9083.00 FEET.

FLOW PROCESS FROM NODE 1316.00 TO NODE 1317.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

MAINLINE Tc(MIN) = 21.80
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.663
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" A 0.20 0.40 1.00 50
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" A 4.20 0.40 1.00 40
NATURAL FAIR COVER
"WOODLAND" A 0.50 0.40 1.00 36
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 0.70 0.30 1.00 63
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 7.40 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.40 0.25 1.00 77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.31
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 13.40 SUBAREA RUNOFF(CFS) = 28.41
EFFECTIVE AREA(ACRES) = 561.00 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 561.00 PEAK FLOW RATE(CFS) = 1252.38
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

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*****
FLOW PROCESS FROM NODE 1316.00 TO NODE 1317.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 21.80
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.663
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"              C      1.10    0.25    1.00    73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"  D      3.40    0.20    1.00    81
NATURAL FAIR COVER
"GRASS"                 D      0.20    0.20    1.00    84
NATURAL FAIR COVER
"OPEN BRUSH"           D      0.20    0.20    1.00    83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 4.90 SUBAREA RUNOFF(CFS) = 10.81
EFFECTIVE AREA(ACRES) = 565.90 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 565.90 PEAK FLOW RATE(CFS) = 1252.38
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1317.00 TO NODE 1336.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 324.00 DOWNSTREAM(FEET) = 275.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1680.00 CHANNEL SLOPE = 0.0292
CHANNEL BASE( FEET) = 8.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH( FEET) = 8.00
CHANNEL FLOW THRU SUBAREA(CFS) = 1252.38
FLOW VELOCITY( FEET/SEC.) = 14.41 FLOW DEPTH( FEET) = 6.14
TRAVEL TIME(MIN.) = 1.94 Tc(MIN.) = 23.74
LONGEST FLOWPATH FROM NODE 1300.00 TO NODE 1336.00 = 10763.00 FEET.

*****
FLOW PROCESS FROM NODE 1317.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 23.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"  A      0.20    0.40    1.00    40
COMMERCIAL              A      0.20    0.40    0.10    32
NATURAL FAIR COVER
"WOODLAND"             A      0.90    0.40    1.00    36
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"  B      0.40    0.30    1.00    63
NATURAL FAIR COVER
"GRASS"                B      4.90    0.30    1.00    69
NATURAL FAIR COVER
"OPEN BRUSH"           B      8.20    0.30    1.00    66
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.31
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA(ACRES) = 14.80 SUBAREA RUNOFF(CFS) = 29.73
EFFECTIVE AREA(ACRES) = 580.70 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 580.70 PEAK FLOW RATE(CFS) = 1252.38
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1317.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 23.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
SUBAREA LOSS RATE DATA(AMC II):

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DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
COMMERCIAL              B      1.20    0.30    0.10    56
NATURAL FAIR COVER
"WOODLAND"             B      2.90    0.30    1.00    60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"  C      56.50   0.25    1.00    75
NATURAL FAIR COVER
"GRASS"                C      17.10   0.25    1.00    79
URBAN FAIR COVER
"TURF"                 C      12.10   0.25    1.00    77
NATURAL FAIR COVER
"OPEN BRUSH"           C      49.90   0.25    1.00    77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA(ACRES) = 139.70 SUBAREA RUNOFF(CFS) = 287.47
EFFECTIVE AREA(ACRES) = 720.40 AREA-AVERAGED Fm(INCH/HR) = 0.25
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 720.40 PEAK FLOW RATE(CFS) = 1484.27

*****
FLOW PROCESS FROM NODE 1317.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 23.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
COMMERCIAL              C      0.40    0.25    0.10    69
NATURAL FAIR COVER
"WOODLAND"             C      26.80   0.25    1.00    73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF"  D      17.40   0.20    1.00    81
NATURAL FAIR COVER
"GRASS"                D      25.50   0.20    1.00    84
URBAN FAIR COVER
"TURF"                 D      0.20    0.20    1.00    82
NATURAL FAIR COVER
"OPEN BRUSH"           D      66.60   0.20    1.00    83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 136.90 SUBAREA RUNOFF(CFS) = 286.62
EFFECTIVE AREA(ACRES) = 857.30 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 857.30 PEAK FLOW RATE(CFS) = 1770.89

*****
FLOW PROCESS FROM NODE 1317.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 23.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.536
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
COMMERCIAL              D      2.60    0.20    0.10    75
PUBLIC PARK             D      2.30    0.20    0.85    75
NATURAL FAIR COVER
"WOODLAND"             D      14.50   0.20    1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.86
SUBAREA AREA(ACRES) = 19.40 SUBAREA RUNOFF(CFS) = 41.26
EFFECTIVE AREA(ACRES) = 876.70 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 876.70 PEAK FLOW RATE(CFS) = 1812.15

*****
FLOW PROCESS FROM NODE 1336.00 TO NODE 1336.00 IS CODE = 1
-----
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
-----
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
TIME OF CONCENTRATION(MIN.) = 23.74
RAINFALL INTENSITY (INCH/HR) = 2.54

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AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24
AREA-AVERAGED Ap = 1.00
EFFECTIVE STREAM AREA(ACRES) = 876.70
TOTAL STREAM AREA(ACRES) = 876.70
PEAK FLOW RATE(CFS) AT CONFLUENCE = 1812.15

FLOW PROCESS FROM NODE 1320.00 TO NODE 1321.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<<
>>>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

INITIAL SUBAREA FLOW-LENGTH(FEET) = 320.00
ELEVATION DATA: UPSTREAM(FEET) = 868.00 DOWNSTREAM(FEET) = 775.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.082
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.432

SUBAREA Tc AND LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	Tc (MIN.)
NATURAL FAIR COVER						
"OPEN BRUSH"	C	0.80	0.25	1.00	77	9.08
NATURAL FAIR COVER						
"CHAPARRAL,NARROWLEAF"	C	0.10	0.25	1.00	81	9.08
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25						
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00						
SUBAREA RUNOFF(CFS) = 3.39						
TOTAL AREA(ACRES) = 0.90 PEAK FLOW RATE(CFS) = 3.39						

FLOW PROCESS FROM NODE 1321.00 TO NODE 1322.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 775.00 DOWNSTREAM(FEET) = 750.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 141.00 CHANNEL SLOPE = 0.1773
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 3.39
FLOW VELOCITY(FEET/SEC.) = 6.33 FLOW DEPTH(FEET) = 0.39
TRAVEL TIME(MIN.) = 0.37 Tc(MIN.) = 9.45
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1322.00 = 461.00 FEET.

FLOW PROCESS FROM NODE 1321.00 TO NODE 1322.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 9.45
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.322
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"OPEN BRUSH"	C	0.40	0.25	1.00	77
NATURAL FAIR COVER					
"CHAPARRAL,NARROWLEAF"	C	0.70	0.25	1.00	81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 4.03					
EFFECTIVE AREA(ACRES) = 2.00 AREA-AVERAGED Fm(INCH/HR) = 0.25					
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00					
TOTAL AREA(ACRES) = 2.00 PEAK FLOW RATE(CFS) = 7.33					

FLOW PROCESS FROM NODE 1322.00 TO NODE 1323.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 750.00 DOWNSTREAM(FEET) = 700.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 365.00 CHANNEL SLOPE = 0.1370
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 7.33
FLOW VELOCITY(FEET/SEC.) = 7.13 FLOW DEPTH(FEET) = 0.63

TRAVEL TIME(MIN.) = 0.85 Tc(MIN.) = 10.31
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1323.00 = 826.00 FEET.

FLOW PROCESS FROM NODE 1322.00 TO NODE 1323.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 10.31
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.099
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"CHAPARRAL,NARROWLEAF"	C	0.80	0.25	1.00	81
NATURAL FAIR COVER					
"CHAPARRAL,NARROWLEAF"	D	0.80	0.20	1.00	86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA(ACRES) = 1.60 SUBAREA RUNOFF(CFS) = 5.58					
EFFECTIVE AREA(ACRES) = 3.60 AREA-AVERAGED Fm(INCH/HR) = 0.24					
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00					
TOTAL AREA(ACRES) = 3.60 PEAK FLOW RATE(CFS) = 12.51					

FLOW PROCESS FROM NODE 1323.00 TO NODE 1324.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 700.00 DOWNSTREAM(FEET) = 680.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 265.00 CHANNEL SLOPE = 0.0755
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 12.51
FLOW VELOCITY(FEET/SEC.) = 6.53 FLOW DEPTH(FEET) = 0.97
TRAVEL TIME(MIN.) = 0.68 Tc(MIN.) = 10.98
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1324.00 = 1091.00 FEET.

FLOW PROCESS FROM NODE 1323.00 TO NODE 1324.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<<

MAINLINE Tc(MIN) = 10.98
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.963
SUBAREA LOSS RATE DATA(AMC II):

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"CHAPARRAL,NARROWLEAF"	C	1.10	0.25	1.00	81
NATURAL FAIR COVER					
"CHAPARRAL,NARROWLEAF"	D	1.30	0.20	1.00	86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA(ACRES) = 2.40 SUBAREA RUNOFF(CFS) = 8.08					
EFFECTIVE AREA(ACRES) = 6.00 AREA-AVERAGED Fm(INCH/HR) = 0.23					
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00					
TOTAL AREA(ACRES) = 6.00 PEAK FLOW RATE(CFS) = 20.15					

FLOW PROCESS FROM NODE 1324.00 TO NODE 1325.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<<

ELEVATION DATA: UPSTREAM(FEET) = 680.00 DOWNSTREAM(FEET) = 670.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 111.00 CHANNEL SLOPE = 0.0901
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 20.15
FLOW VELOCITY(FEET/SEC.) = 7.68 FLOW DEPTH(FEET) = 0.90
TRAVEL TIME(MIN.) = 0.24 Tc(MIN.) = 11.22
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1325.00 = 1202.00 FEET.

FLOW PROCESS FROM NODE 1324.00 TO NODE 1325.00 IS CODE = 81

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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 11.22
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.915
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C       0.90   0.25   1.00   81
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D       1.10   0.20   1.00   86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 2.00   SUBAREA RUNOFF (CFS) = 6.65
EFFECTIVE AREA (ACRES) = 8.00   AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23   AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 8.00   PEAK FLOW RATE (CFS) = 26.53

*****
FLOW PROCESS FROM NODE 1325.00 TO NODE 1326.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 670.00   DOWNSTREAM (FEET) = 665.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 82.00   CHANNEL SLOPE = 0.0610
CHANNEL BASE (FEET) = 2.00   "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 26.53
FLOW VELOCITY (FEET/SEC.) = 7.20   FLOW DEPTH (FEET) = 1.16
TRAVEL TIME (MIN.) = 0.19   Tc (MIN.) = 11.41
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1326.00 = 1284.00 FEET.

*****
FLOW PROCESS FROM NODE 1325.00 TO NODE 1326.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 11.41
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.877
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"        C       0.60   0.25   1.00   77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C       4.70   0.25   1.00   81
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D       2.90   0.20   1.00   86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 8.20   SUBAREA RUNOFF (CFS) = 26.90
EFFECTIVE AREA (ACRES) = 16.20   AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23   AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 16.20   PEAK FLOW RATE (CFS) = 53.16

*****
FLOW PROCESS FROM NODE 1326.00 TO NODE 1327.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 665.00   DOWNSTREAM (FEET) = 625.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 826.00   CHANNEL SLOPE = 0.0484
CHANNEL BASE (FEET) = 2.00   "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 53.16
FLOW VELOCITY (FEET/SEC.) = 7.93   FLOW DEPTH (FEET) = 1.77
TRAVEL TIME (MIN.) = 1.73   Tc (MIN.) = 13.15
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1327.00 = 2110.00 FEET.

*****
FLOW PROCESS FROM NODE 1326.00 TO NODE 1327.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 13.15
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.567

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SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C       1.10   0.25   1.00   75
NATURAL FAIR COVER
"OPEN BRUSH"        C       2.00   0.25   1.00   77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C       2.10   0.25   1.00   81
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D       0.70   0.20   1.00   81
NATURAL FAIR COVER
"OPEN BRUSH"        D       1.30   0.20   1.00   83
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D       4.10   0.20   1.00   86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 11.30   SUBAREA RUNOFF (CFS) = 34.00
EFFECTIVE AREA (ACRES) = 27.50   AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23   AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 27.50   PEAK FLOW RATE (CFS) = 82.63

*****
FLOW PROCESS FROM NODE 1326.00 TO NODE 1327.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 13.15
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.567
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND"          D       0.90   0.20   1.00   79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 0.90   SUBAREA RUNOFF (CFS) = 2.73
EFFECTIVE AREA (ACRES) = 28.40   AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23   AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 28.40   PEAK FLOW RATE (CFS) = 85.36

*****
FLOW PROCESS FROM NODE 1327.00 TO NODE 1328.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 625.00   DOWNSTREAM (FEET) = 595.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 794.00   CHANNEL SLOPE = 0.0378
CHANNEL BASE (FEET) = 3.00   "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040   MAXIMUM DEPTH (FEET) = 3.00
CHANNEL FLOW THRU SUBAREA (CFS) = 85.36
FLOW VELOCITY (FEET/SEC.) = 8.09   FLOW DEPTH (FEET) = 2.08
TRAVEL TIME (MIN.) = 1.64   Tc (MIN.) = 14.79
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1328.00 = 2904.00 FEET.

*****
FLOW PROCESS FROM NODE 1327.00 TO NODE 1328.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 14.79
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.331
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C       1.30   0.25   1.00   75
NATURAL FAIR COVER
"OPEN BRUSH"        C       3.60   0.25   1.00   77
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C       5.40   0.25   1.00   81
NATURAL FAIR COVER
"WOODLAND"          C       0.20   0.25   1.00   73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D       1.30   0.20   1.00   81
NATURAL FAIR COVER
"OPEN BRUSH"        D       1.00   0.20   1.00   83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24

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SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 12.80 SUBAREA RUNOFF (CFS) = 35.60
EFFECTIVE AREA (ACRES) = 41.20 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 41.20 PEAK FLOW RATE (CFS) = 114.93

FLOW PROCESS FROM NODE 1327.00 TO NODE 1328.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 14.79
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.331
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" D 6.30 0.20 1.00 86
NATURAL FAIR COVER
"WOODLAND" D 1.40 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 7.70 SUBAREA RUNOFF (CFS) = 21.70
EFFECTIVE AREA (ACRES) = 48.90 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 48.90 PEAK FLOW RATE (CFS) = 136.63

FLOW PROCESS FROM NODE 1328.00 TO NODE 1329.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 595.00 DOWNSTREAM (FEET) = 590.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 531.00 CHANNEL SLOPE = 0.0094
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 136.63
FLOW VELOCITY (FEET/SEC.) = 5.43 FLOW DEPTH (FEET) = 3.40
TRAVEL TIME (MIN.) = 1.63 Tc (MIN.) = 16.41
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1329.00 = 3435.00 FEET.

FLOW PROCESS FROM NODE 1328.00 TO NODE 1329.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 16.41
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.142
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 0.80 0.25 1.00 77
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 0.20 0.25 0.20 69
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" C 1.60 0.25 1.00 81
NATURAL FAIR COVER
"WOODLAND" C 0.20 0.25 1.00 73
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 0.50 0.20 0.20 75
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" D 2.40 0.20 1.00 86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.90
SUBAREA AREA (ACRES) = 5.70 SUBAREA RUNOFF (CFS) = 15.07
EFFECTIVE AREA (ACRES) = 54.60 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.99
TOTAL AREA (ACRES) = 54.60 PEAK FLOW RATE (CFS) = 143.37

FLOW PROCESS FROM NODE 1328.00 TO NODE 1329.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 16.41
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.142

SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" D 0.10 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 0.10 SUBAREA RUNOFF (CFS) = 0.26
EFFECTIVE AREA (ACRES) = 54.70 AREA-AVERAGED Fm (INCH/HR) = 0.22
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.99
TOTAL AREA (ACRES) = 54.70 PEAK FLOW RATE (CFS) = 143.63

FLOW PROCESS FROM NODE 1329.00 TO NODE 1330.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 590.00 DOWNSTREAM (FEET) = 587.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 296.00 CHANNEL SLOPE = 0.0101
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 143.63
FLOW VELOCITY (FEET/SEC.) = 5.65 FLOW DEPTH (FEET) = 3.42
TRAVEL TIME (MIN.) = 0.87 Tc (MIN.) = 17.29
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1330.00 = 3731.00 FEET.

FLOW PROCESS FROM NODE 1329.00 TO NODE 1330.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 17.29
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.044
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C 5.80 0.25 1.00 75
RESIDENTIAL
"5-7 DWELLINGS/ACRE" C 0.50 0.25 0.50 69
NATURAL FAIR COVER
"OPEN BRUSH" C 4.80 0.25 1.00 77
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 8.70 0.25 0.20 69
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" C 3.20 0.25 1.00 81
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" D 0.70 0.20 1.00 81
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.70
SUBAREA AREA (ACRES) = 23.70 SUBAREA RUNOFF (CFS) = 61.25
EFFECTIVE AREA (ACRES) = 78.40 AREA-AVERAGED Fm (INCH/HR) = 0.21
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.90
TOTAL AREA (ACRES) = 78.40 PEAK FLOW RATE (CFS) = 200.07

FLOW PROCESS FROM NODE 1329.00 TO NODE 1330.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 17.29
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.044
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" D 1.60 0.20 1.00 83
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 8.20 0.20 0.20 75
NATURAL FAIR COVER
"CHAPARRAL, NARROWLEAF" D 4.80 0.20 1.00 86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.55
SUBAREA AREA (ACRES) = 14.60 SUBAREA RUNOFF (CFS) = 38.55
EFFECTIVE AREA (ACRES) = 93.00 AREA-AVERAGED Fm (INCH/HR) = 0.19
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.85
TOTAL AREA (ACRES) = 93.00 PEAK FLOW RATE (CFS) = 238.62

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*****
FLOW PROCESS FROM NODE 1330.00 TO NODE 1331.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 587.00 DOWNSTREAM(FEET) = 570.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1259.00 CHANNEL SLOPE = 0.0135
CHANNEL BASE(FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 5.00
CHANNEL FLOW THRU SUBAREA(CFS) = 238.62
FLOW VELOCITY(FEET/SEC.) = 7.13 FLOW DEPTH(FEET) = 3.80
TRAVEL TIME(MIN.) = 2.94 Tc(MIN.) = 20.23
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1331.00 = 4990.00 FEET.

*****
FLOW PROCESS FROM NODE 1330.00 TO NODE 1331.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 20.23
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.782
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 31.80 0.25 0.20 69
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" C 0.60 0.25 1.00 81
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 24.40 0.20 0.20 75
NATURAL FAIR COVER
"CHAPARRAL,NARROWLEAF" D 0.40 0.20 1.00 86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.21
SUBAREA AREA(ACRES) = 57.20 SUBAREA RUNOFF(CFS) = 140.73
EFFECTIVE AREA(ACRES) = 150.20 AREA-AVERAGED Fm(INCH/HR) = 0.14
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.61
TOTAL AREA(ACRES) = 150.20 PEAK FLOW RATE(CFS) = 357.47

*****
FLOW PROCESS FROM NODE 1331.00 TO NODE 1332.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 570.00 DOWNSTREAM(FEET) = 565.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 724.00 CHANNEL SLOPE = 0.0069
CHANNEL BASE(FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 6.00
CHANNEL FLOW THRU SUBAREA(CFS) = 357.47
FLOW VELOCITY(FEET/SEC.) = 6.15 FLOW DEPTH(FEET) = 5.19
TRAVEL TIME(MIN.) = 1.96 Tc(MIN.) = 22.19
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1332.00 = 5714.00 FEET.

*****
FLOW PROCESS FROM NODE 1331.00 TO NODE 1332.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 22.19
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.633
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"5-7 DWELLINGS/ACRE" C 1.30 0.25 0.50 69
NATURAL FAIR COVER
"OPEN BRUSH" C 0.20 0.25 1.00 77
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 23.60 0.25 0.20 69
RESIDENTIAL
"5-7 DWELLINGS/ACRE" D 0.40 0.20 0.50 75
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 19.10 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.22
SUBAREA AREA(ACRES) = 44.60 SUBAREA RUNOFF(CFS) = 103.73

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EFFECTIVE AREA(ACRES) = 194.80 AREA-AVERAGED Fm(INCH/HR) = 0.12
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.52
TOTAL AREA(ACRES) = 194.80 PEAK FLOW RATE(CFS) = 441.04

*****
FLOW PROCESS FROM NODE 1332.00 TO NODE 1333.00 IS CODE = 31
-----
>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 565.00 DOWNSTREAM(FEET) = 435.00
FLOW LENGTH(FEET) = 3577.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 60.0 INCH PIPE IS 46.1 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 27.26
ESTIMATED PIPE DIAMETER(INCH) = 60.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 441.04
PIPE TRAVEL TIME(MIN.) = 2.19 Tc(MIN.) = 24.38
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1333.00 = 9291.00 FEET.

*****
FLOW PROCESS FROM NODE 1332.00 TO NODE 1333.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 24.38
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.497
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 24.50 0.25 0.20 69
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 25.80 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.20
SUBAREA AREA(ACRES) = 50.30 SUBAREA RUNOFF(CFS) = 111.02
EFFECTIVE AREA(ACRES) = 245.10 AREA-AVERAGED Fm(INCH/HR) = 0.10
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.45
TOTAL AREA(ACRES) = 245.10 PEAK FLOW RATE(CFS) = 528.19

*****
FLOW PROCESS FROM NODE 1333.00 TO NODE 1334.00 IS CODE = 31
-----
>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 435.00 DOWNSTREAM(FEET) = 405.00
FLOW LENGTH(FEET) = 1367.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 69.0 INCH PIPE IS 56.2 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 23.33
ESTIMATED PIPE DIAMETER(INCH) = 69.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 528.19
PIPE TRAVEL TIME(MIN.) = 0.98 Tc(MIN.) = 25.36
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1334.00 = 10658.00 FEET.

*****
FLOW PROCESS FROM NODE 1333.00 TO NODE 1334.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 25.36
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.442
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.20 0.25 1.00 75
COMMERCIAL
"OPEN BRUSH" C 0.10 0.25 0.10 69
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 68.20 0.25 0.20 69
NATURAL FAIR COVER
"OPEN BRUSH" D 0.20 0.20 1.00 83
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 63.30 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.20
SUBAREA AREA(ACRES) = 132.00 SUBAREA RUNOFF(CFS) = 284.62
EFFECTIVE AREA(ACRES) = 377.10 AREA-AVERAGED Fm(INCH/HR) = 0.08

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AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.36
TOTAL AREA(ACRES) = 377.10 PEAK FLOW RATE(CFS) = 800.51
*****
FLOW PROCESS FROM NODE 1334.00 TO NODE 1335.00 IS CODE = 31
-----
>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 405.00 DOWNSTREAM(FEET) = 310.00
FLOW LENGTH(FEET) = 1320.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 66.0 INCH PIPE IS 50.7 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 40.89
ESTIMATED PIPE DIAMETER(INCH) = 66.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 800.51
PIPE TRAVEL TIME(MIN.) = 0.54 Tc(MIN.) = 25.89
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1335.00 = 11978.00 FEET.
*****
FLOW PROCESS FROM NODE 1334.00 TO NODE 1335.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 25.89
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.414
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 2.30 0.25 0.20 69
NATURAL FAIR COVER
"WOODLAND" C 0.30 0.25 1.00 73
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 1.40 0.20 0.20 75
NATURAL FAIR COVER
"WOODLAND" D 0.20 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.36
SUBAREA AREA(ACRES) = 4.60 SUBAREA RUNOFF(CFS) = 9.64
EFFECTIVE AREA(ACRES) = 381.70 AREA-AVERAGED Fm(INCH/HR) = 0.08
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.36
TOTAL AREA(ACRES) = 381.70 PEAK FLOW RATE(CFS) = 800.66
*****
FLOW PROCESS FROM NODE 1335.00 TO NODE 1335.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 25.89
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.414
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
AGRICULTURAL FAIR COVER
"ORCHARDS" A 0.20 0.40 1.00 44
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" A 19.70 0.40 1.00 40
NATURAL FAIR COVER
"WOODLAND" A 0.20 0.40 1.00 36
COMMERCIAL
"CHAPARRAL,BROADLEAF" B 13.90 0.30 1.00 63
NATURAL FAIR COVER
"WOODLAND" B 0.10 0.30 1.00 60
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.36
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
SUBAREA AREA(ACRES) = 34.40 SUBAREA RUNOFF(CFS) = 63.70
EFFECTIVE AREA(ACRES) = 416.10 AREA-AVERAGED Fm(INCH/HR) = 0.11
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.42
TOTAL AREA(ACRES) = 416.10 PEAK FLOW RATE(CFS) = 864.36
*****
FLOW PROCESS FROM NODE 1335.00 TO NODE 1335.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 25.89
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.414
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.90 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.20 0.25 1.00 77
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 6.40 0.25 0.20 69
NATURAL FAIR COVER
"WOODLAND" C 2.70 0.25 1.00 73
NATURAL FAIR COVER
"OPEN BRUSH" D 1.80 0.20 1.00 83
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 1.90 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.52
SUBAREA AREA(ACRES) = 13.90 SUBAREA RUNOFF(CFS) = 28.66
EFFECTIVE AREA(ACRES) = 430.00 AREA-AVERAGED Fm(INCH/HR) = 0.11
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.42
TOTAL AREA(ACRES) = 430.00 PEAK FLOW RATE(CFS) = 893.02
*****
FLOW PROCESS FROM NODE 1335.00 TO NODE 1335.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 25.89
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.414
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 1.60 0.20 1.00 81
NATURAL FAIR COVER
"WOODLAND" D 11.00 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 12.60 SUBAREA RUNOFF(CFS) = 25.10
EFFECTIVE AREA(ACRES) = 442.60 AREA-AVERAGED Fm(INCH/HR) = 0.11
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.44
TOTAL AREA(ACRES) = 442.60 PEAK FLOW RATE(CFS) = 918.12
*****
FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 310.00 DOWNSTREAM(FEET) = 275.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 4499.00 CHANNEL SLOPE = 0.0078
CHANNEL BASE(FEET) = 60.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.025 MAXIMUM DEPTH(FEET) = 15.00
CHANNEL FLOW THRU SUBAREA(CFS) = 918.12
FLOW VELOCITY(FEET/SEC.) = 7.63 FLOW DEPTH(FEET) = 1.89
TRAVEL TIME(MIN.) = 9.83 Tc(MIN.) = 35.72
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1336.00 = 16477.00 FEET.
*****
FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 35.72
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.008
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"11+ DWELLINGS/ACRE" A 4.80 0.40 0.20 32
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" A 15.30 0.40 1.00 40
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B 28.30 0.30 1.00 63
NATURAL FAIR COVER
"GRASS" B 0.70 0.30 1.00 69
NATURAL FAIR COVER

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"OPEN BRUSH"      B      0.20  0.30  1.00  66
COMMERCIAL       B      31.50  0.30  0.10  56
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.33
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
SUBAREA AREA(ACRES) = 80.80 SUBAREA RUNOFF(CFS) = 131.45
EFFECTIVE AREA(ACRES) = 523.40 AREA-AVERAGED Fm(INCH/HR) = 0.12
AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.46
TOTAL AREA(ACRES) = 523.40 PEAK FLOW RATE(CFS) = 918.12
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 35.72
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.008
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"11+ DWELLINGS/ACRE" B      15.50  0.30  0.20  56
NATURAL FAIR COVER
"WOODLAND"          B      2.20  0.30  1.00  60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C     24.40  0.25  1.00  75
NATURAL FAIR COVER
"GRASS"             C      0.70  0.25  1.00  79
NATURAL FAIR COVER
"OPEN BRUSH"        C     16.00  0.25  1.00  77
COMMERCIAL          C     37.80  0.25  0.10  69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.52
SUBAREA AREA(ACRES) = 96.60 SUBAREA RUNOFF(CFS) = 163.07
EFFECTIVE AREA(ACRES) = 620.00 AREA-AVERAGED Fm(INCH/HR) = 0.12
AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.47
TOTAL AREA(ACRES) = 620.00 PEAK FLOW RATE(CFS) = 1051.22

*****
FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 35.72
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.008
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"11+ DWELLINGS/ACRE" C      15.00  0.25  0.20  69
NATURAL FAIR COVER
"WOODLAND"          C      1.90  0.25  1.00  73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D     12.60  0.20  1.00  81
RESIDENTIAL
"5-7 DWELLINGS/ACRE" D      0.40  0.20  0.50  75
URBAN FAIR COVER
"TURF"              D      0.20  0.20  1.00  82
NATURAL FAIR COVER
"OPEN BRUSH"        D     43.80  0.20  1.00  83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.83
SUBAREA AREA(ACRES) = 73.90 SUBAREA RUNOFF(CFS) = 122.24
EFFECTIVE AREA(ACRES) = 693.90 AREA-AVERAGED Fm(INCH/HR) = 0.13
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.51
TOTAL AREA(ACRES) = 693.90 PEAK FLOW RATE(CFS) = 1173.47

*****
FLOW PROCESS FROM NODE 1335.00 TO NODE 1336.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 35.72
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.008
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
COMMERCIAL          D      48.60  0.20  0.10  75

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PUBLIC PARK       D      5.60  0.20  0.85  75
RESIDENTIAL
"11+ DWELLINGS/ACRE" D     10.10  0.20  0.20  75
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D      1.30  0.20  0.60  75
NATURAL FAIR COVER
"WOODLAND"        D     10.50  0.20  1.00  79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.30
SUBAREA AREA(ACRES) = 76.10 SUBAREA RUNOFF(CFS) = 133.42
EFFECTIVE AREA(ACRES) = 770.00 AREA-AVERAGED Fm(INCH/HR) = 0.12
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.49
TOTAL AREA(ACRES) = 770.00 PEAK FLOW RATE(CFS) = 1306.89

*****
FLOW PROCESS FROM NODE 1336.00 TO NODE 1336.00 IS CODE = 1
-----
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<
-----
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
TIME OF CONCENTRATION(MIN.) = 35.72
RAINFALL INTENSITY (INCH/HR) = 2.01
AREA-AVERAGED Fm(INCH/HR) = 0.12
AREA-AVERAGED Fp(INCH/HR) = 0.25
AREA-AVERAGED Ap = 0.49
EFFECTIVE STREAM AREA(ACRES) = 770.00
TOTAL STREAM AREA(ACRES) = 770.00
PEAK FLOW RATE(CFS) AT CONFLUENCE = 1306.89

** CONFLUENCE DATA **
STREAM   Q      Tc  Intensity  Fp(Fm)   Ap  Ae  HEADWATER
NUMBER  (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1      1812.15  23.74  2.536  0.24( 0.24) 1.00  876.7  1300.00
2      1306.89  35.72  2.008  0.25( 0.12) 0.49  770.0  1320.00

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

** PEAK FLOW RATE TABLE **
STREAM   Q      Tc  Intensity  Fp(Fm)   Ap  Ae  HEADWATER
NUMBER  (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1      2923.49  23.74  2.536  0.24( 0.20) 0.81  1388.4  1300.00
2      2703.01  35.72  2.008  0.24( 0.18) 0.76  1646.7  1320.00

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) = 2923.49 Tc(MIN.) = 23.74
EFFECTIVE AREA(ACRES) = 1388.41 AREA-AVERAGED Fm(INCH/HR) = 0.20
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.81
TOTAL AREA(ACRES) = 1646.70
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1336.00 = 16477.00 FEET.

*****
FLOW PROCESS FROM NODE 1336.00 TO NODE 1337.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 275.00 DOWNSTREAM(FEET) = 260.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 2012.00 CHANNEL SLOPE = 0.0075
CHANNEL BASE(FEET) = 60.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.025 MAXIMUM DEPTH(FEET) = 15.00
CHANNEL FLOW THRU SUBAREA(CFS) = 2923.49
FLOW VELOCITY(FEET/SEC.) = 11.42 FLOW DEPTH(FEET) = 3.79
TRAVEL TIME(MIN.) = 2.94 Tc(MIN.) = 26.68
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1337.00 = 18489.00 FEET.

*****
FLOW PROCESS FROM NODE 1336.00 TO NODE 1337.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 26.68
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.373
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN

```


DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"GRASS"	C	0.90	0.25	1.00	79
NATURAL FAIR COVER					
"OPEN BRUSH"	C	12.90	0.25	1.00	77
COMMERCIAL	C	1.70	0.25	0.10	69
RESIDENTIAL					
"11+ DWELLINGS/ACRE"	C	5.60	0.25	0.20	69
NATURAL FAIR COVER					
"WOODLAND"	C	10.70	0.25	1.00	73
NATURAL POOR COVER					
"BARREN"	D	0.70	0.20	1.00	93
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.82					
SUBAREA AREA(ACRES) = 32.50 SUBAREA RUNOFF(CFS) = 58.46					
EFFECTIVE AREA(ACRES) = 1656.51 AREA-AVERAGED Fm(INCH/HR) = 0.19					
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.78					
TOTAL AREA(ACRES) = 1914.80 PEAK FLOW RATE(CFS) = 3004.48					
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE					

FLOW PROCESS FROM NODE 1337.00 TO NODE 1338.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

MAINLINE Tc(MIN) = 30.49					
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.201					
SUBAREA LOSS RATE DATA(AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"GRASS"	D	0.90	0.20	1.00	84
AGRICULTURAL FAIR COVER					
"PASTURE, DRYLAND"	D	9.20	0.20	1.00	84
NATURAL FAIR COVER					
"OPEN BRUSH"	D	19.50	0.20	1.00	83
NATURAL GOOD COVER					
"MEADOWS"	D	2.00	0.20	1.00	78
RESIDENTIAL					
"11+ DWELLINGS/ACRE"	D	8.40	0.20	0.20	75
NATURAL FAIR COVER					
"WOODLAND"	D	6.20	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.85					
SUBAREA AREA(ACRES) = 46.20 SUBAREA RUNOFF(CFS) = 84.42					
EFFECTIVE AREA(ACRES) = 1702.71 AREA-AVERAGED Fm(INCH/HR) = 0.19					
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.78					
TOTAL AREA(ACRES) = 1961.00 PEAK FLOW RATE(CFS) = 3077.59					

FLOW PROCESS FROM NODE 1338.00 TO NODE 1375.00 IS CODE = 51					

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<					
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<					

ELEVATION DATA: UPSTREAM(FEET) = 255.00 DOWNSTREAM(FEET) = 240.00					
CHANNEL LENGTH THRU SUBAREA(FEET) = 1844.00 CHANNEL SLOPE = 0.0081					
CHANNEL BASE(FEET) = 60.00 "Z" FACTOR = 2.000					
MANNING'S FACTOR = 0.025 MAXIMUM DEPTH(FEET) = 15.00					
CHANNEL FLOW THRU SUBAREA(CFS) = 3077.59					
FLOW VELOCITY(FEET/SEC.) = 11.97 FLOW DEPTH(FEET) = 3.80					
TRAVEL TIME(MIN.) = 2.57 Tc(MIN.) = 33.06					
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1375.00 = 22215.00 FEET.					

FLOW PROCESS FROM NODE 1338.00 TO NODE 1375.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

MAINLINE Tc(MIN) = 33.06					
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.104					
SUBAREA LOSS RATE DATA(AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"GRASS"	A	2.70	0.40	1.00	50
AGRICULTURAL FAIR COVER					

"PASTURE, DRYLAND"	A	27.70	0.40	1.00	49
NATURAL FAIR COVER					
"OPEN BRUSH"	A	0.60	0.40	1.00	46
RESIDENTIAL					
"11+ DWELLINGS/ACRE"	A	5.30	0.40	0.20	32
AGRICULTURAL FAIR COVER					
"PASTURE, DRYLAND"	A	1.60	0.40	1.00	49
NATURAL FAIR COVER					
"WOODLAND"	A	2.70	0.40	1.00	36
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.90					
SUBAREA AREA(ACRES) = 40.60 SUBAREA RUNOFF(CFS) = 63.78					
EFFECTIVE AREA(ACRES) = 1743.31 AREA-AVERAGED Fm(INCH/HR) = 0.20					
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.79					
TOTAL AREA(ACRES) = 2001.60 PEAK FLOW RATE(CFS) = 3077.59					
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE					

FLOW PROCESS FROM NODE 1338.00 TO NODE 1375.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

MAINLINE Tc(MIN) = 33.06					
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.104					
SUBAREA LOSS RATE DATA(AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER					
"CHAPARRAL, BROADLEAF"	B	6.50	0.30	1.00	63
NATURAL POOR COVER					
"BARREN"	B	0.20	0.30	1.00	86
NATURAL FAIR COVER					
"GRASS"	B	22.60	0.30	1.00	69
URBAN FAIR COVER					
"TURF"	B	0.40	0.30	1.00	65
AGRICULTURAL FAIR COVER					
"PASTURE, DRYLAND"	B	1.80	0.30	1.00	69
NATURAL FAIR COVER					
"OPEN BRUSH"	B	22.20	0.30	1.00	66
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00					
SUBAREA AREA(ACRES) = 53.70 SUBAREA RUNOFF(CFS) = 87.18					
EFFECTIVE AREA(ACRES) = 1797.01 AREA-AVERAGED Fm(INCH/HR) = 0.20					
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.79					
TOTAL AREA(ACRES) = 2055.30 PEAK FLOW RATE(CFS) = 3079.07					

FLOW PROCESS FROM NODE 1338.00 TO NODE 1375.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

MAINLINE Tc(MIN) = 33.06					
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.104					
SUBAREA LOSS RATE DATA(AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
COMMERCIAL	B	1.90	0.30	0.10	56
RESIDENTIAL					
"11+ DWELLINGS/ACRE"	B	18.40	0.30	0.20	56
RESIDENTIAL					
"3-4 DWELLINGS/ACRE"	B	18.80	0.30	0.60	56
NATURAL FAIR COVER					
"WOODLAND"	B	32.40	0.30	1.00	60
NATURAL FAIR COVER					
"CHAPARRAL, BROADLEAF"	C	71.40	0.25	1.00	75
NATURAL FAIR COVER					
"GRASS"	C	12.20	0.25	1.00	79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27					
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.85					
SUBAREA AREA(ACRES) = 155.10 SUBAREA RUNOFF(CFS) = 262.02					
EFFECTIVE AREA(ACRES) = 1952.11 AREA-AVERAGED Fm(INCH/HR) = 0.20					
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.80					
TOTAL AREA(ACRES) = 2210.40 PEAK FLOW RATE(CFS) = 3341.09					

FLOW PROCESS FROM NODE 1338.00 TO NODE 1375.00 IS CODE = 81					

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<					

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MAINLINE Tc(MIN) = 33.06
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
URBAN FAIR COVER
"TURF"                  C      0.50    0.25    1.00    77
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND"     C      0.20    0.25    1.00    79
NATURAL FAIR COVER
"OPEN BRUSH"          C      85.10   0.25    1.00    77
RESIDENTIAL
"11+ DWELLINGS/ACRE"  C      20.80   0.25    0.20    69
RESIDENTIAL
"3-4 DWELLINGS/ACRE"  C      60.20   0.25    0.60    69
NATURAL FAIR COVER
"WOODLAND"            C      78.80   0.25    1.00    73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.83
SUBAREA AREA(ACRES) = 245.60  SUBAREA RUNOFF(CFS) = 418.92
EFFECTIVE AREA(ACRES) = 2197.71  AREA-AVERAGED Fm(INCH/HR) = 0.20
AREA-AVERAGED Fp(INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.80
TOTAL AREA(ACRES) = 2456.00  PEAK FLOW RATE(CFS) = 3760.00

*****
FLOW PROCESS FROM NODE 1338.00 TO NODE 1375.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 33.06
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
PUBLIC PARK             D      0.10    0.20    0.85    75
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" D      1.70    0.20    1.00    81
NATURAL FAIR COVER
"GRASS"                 D      15.10   0.20    1.00    84
URBAN FAIR COVER
"TURF"                  D      3.30    0.20    1.00    82
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND"     D      2.50    0.20    1.00    84
NATURAL FAIR COVER
"OPEN BRUSH"           D      10.50   0.20    1.00    83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 33.20  SUBAREA RUNOFF(CFS) = 56.89
EFFECTIVE AREA(ACRES) = 2230.91  AREA-AVERAGED Fm(INCH/HR) = 0.20
AREA-AVERAGED Fp(INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.80
TOTAL AREA(ACRES) = 2489.20  PEAK FLOW RATE(CFS) = 3816.89

*****
FLOW PROCESS FROM NODE 1338.00 TO NODE 1375.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 33.06
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.104
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
RESIDENTIAL
"11+ DWELLINGS/ACRE"  D      29.60   0.20    0.20    75
RESIDENTIAL
"3-4 DWELLINGS/ACRE"  D      3.90    0.20    0.60    75
NATURAL FAIR COVER
"WOODLAND"            D      12.80   0.20    1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.45
SUBAREA AREA(ACRES) = 46.30  SUBAREA RUNOFF(CFS) = 83.87
EFFECTIVE AREA(ACRES) = 2277.21  AREA-AVERAGED Fm(INCH/HR) = 0.20
AREA-AVERAGED Fp(INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.80
TOTAL AREA(ACRES) = 2535.50  PEAK FLOW RATE(CFS) = 3900.76

*****
FLOW PROCESS FROM NODE 1375.00 TO NODE 1375.00 IS CODE = 10
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>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<
-----
*****
FLOW PROCESS FROM NODE 1340.00 TO NODE 1341.00 IS CODE = 21
-----
>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
-----
INITIAL SUBAREA FLOW-LENGTH(FEET) = 324.00
ELEVATION DATA: UPSTREAM(FEET) = 1072.00  DOWNSTREAM(FEET) = 1065.00

Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 15.350
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.261
SUBAREA Tc AND LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS  Tc
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN  (MIN.)
NATURAL FAIR COVER
"GRASS"                 D      0.50    0.20    1.00    84  15.35
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA RUNOFF(CFS) = 1.38
TOTAL AREA(ACRES) = 0.50  PEAK FLOW RATE(CFS) = 1.38

*****
FLOW PROCESS FROM NODE 1341.00 TO NODE 1342.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 1065.00  DOWNSTREAM(FEET) = 975.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 273.00  CHANNEL SLOPE = 0.3297
CHANNEL BASE(FEET) = 1.00  "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040  MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 1.38
FLOW VELOCITY(FEET/SEC.) = 5.96  FLOW DEPTH(FEET) = 0.19
TRAVEL TIME(MIN.) = 0.76  Tc(MIN.) = 16.11
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1342.00 = 597.00 FEET.

*****
FLOW PROCESS FROM NODE 1341.00 TO NODE 1342.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 16.11
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.175
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                 C      0.30    0.25    1.00    79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 0.30  SUBAREA RUNOFF(CFS) = 0.79
EFFECTIVE AREA(ACRES) = 0.80  AREA-AVERAGED Fm(INCH/HR) = 0.22
AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 0.80  PEAK FLOW RATE(CFS) = 2.13

*****
FLOW PROCESS FROM NODE 1342.00 TO NODE 1343.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 975.00  DOWNSTREAM(FEET) = 915.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 202.00  CHANNEL SLOPE = 0.2970
CHANNEL BASE(FEET) = 1.00  "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040  MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 2.13
FLOW VELOCITY(FEET/SEC.) = 6.60  FLOW DEPTH(FEET) = 0.26
TRAVEL TIME(MIN.) = 0.51  Tc(MIN.) = 16.62
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1343.00 = 799.00 FEET.

*****
FLOW PROCESS FROM NODE 1342.00 TO NODE 1343.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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=====
MAINLINE Tc(MIN) = 16.62
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.118
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"                  C        0.30     0.25     1.00     79
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    C        0.30     0.25     0.60     69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.80
SUBAREA AREA(ACRES) = 0.60 SUBAREA RUNOFF(CFS) = 1.58
EFFECTIVE AREA(ACRES) = 1.40 AREA-AVERAGED Fm(INCH/HR) = 0.21
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.91
TOTAL AREA(ACRES) = 1.40 PEAK FLOW RATE(CFS) = 3.66

*****
FLOW PROCESS FROM NODE 1343.00 TO NODE 1344.00 IS CODE = 51
-----
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 925.00 DOWNSTREAM(FEET) = 900.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 83.00 CHANNEL SLOPE = 0.3012
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 3.66
FLOW VELOCITY(FEET/SEC.) = 7.81 FLOW DEPTH(FEET) = 0.35
TRAVEL TIME(MIN.) = 0.18 Tc(MIN.) = 16.80
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1344.00 = 882.00 FEET.

*****
FLOW PROCESS FROM NODE 1343.00 TO NODE 1344.00 IS CODE = 81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 16.80
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.098
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    C        0.30     0.25     0.60     69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
SUBAREA AREA(ACRES) = 0.30 SUBAREA RUNOFF(CFS) = 0.80
EFFECTIVE AREA(ACRES) = 1.70 AREA-AVERAGED Fm(INCH/HR) = 0.20
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.86
TOTAL AREA(ACRES) = 1.70 PEAK FLOW RATE(CFS) = 4.43

*****
FLOW PROCESS FROM NODE 1344.00 TO NODE 1345.00 IS CODE = 51
-----
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 900.00 DOWNSTREAM(FEET) = 875.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 113.00 CHANNEL SLOPE = 0.2212
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 4.43
FLOW VELOCITY(FEET/SEC.) = 7.38 FLOW DEPTH(FEET) = 0.42
TRAVEL TIME(MIN.) = 0.26 Tc(MIN.) = 17.06
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1345.00 = 995.00 FEET.

*****
FLOW PROCESS FROM NODE 1344.00 TO NODE 1345.00 IS CODE = 81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 17.06
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.070
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"                  C        1.70     0.25     1.00     79
NATURAL FAIR COVER

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"OPEN BRUSH"            C        0.70     0.25     1.00     77
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    C        0.80     0.25     0.60     69
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    D        0.20     0.20     0.60     75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.88
SUBAREA AREA(ACRES) = 3.40 SUBAREA RUNOFF(CFS) = 8.72
EFFECTIVE AREA(ACRES) = 5.10 AREA-AVERAGED Fm(INCH/HR) = 0.21
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.87
TOTAL AREA(ACRES) = 5.10 PEAK FLOW RATE(CFS) = 13.11

*****
FLOW PROCESS FROM NODE 1345.00 TO NODE 1346.00 IS CODE = 51
-----
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 875.00 DOWNSTREAM(FEET) = 800.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 331.00 CHANNEL SLOPE = 0.2266
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 13.11
FLOW VELOCITY(FEET/SEC.) = 9.95 FLOW DEPTH(FEET) = 0.75
TRAVEL TIME(MIN.) = 0.55 Tc(MIN.) = 17.61
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1346.00 = 1326.00 FEET.

*****
FLOW PROCESS FROM NODE 1345.00 TO NODE 1346.00 IS CODE = 81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 17.61
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.010
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"                  C        0.10     0.25     1.00     79
NATURAL FAIR COVER
"OPEN BRUSH"            C        0.40     0.25     1.00     77
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    C        1.30     0.25     0.60     69
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    D        1.10     0.20     0.60     75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.67
SUBAREA AREA(ACRES) = 2.90 SUBAREA RUNOFF(CFS) = 7.45
EFFECTIVE AREA(ACRES) = 8.00 AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.80
TOTAL AREA(ACRES) = 8.00 PEAK FLOW RATE(CFS) = 20.29

*****
FLOW PROCESS FROM NODE 1346.00 TO NODE 1347.00 IS CODE = 51
-----
>>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 800.00 DOWNSTREAM(FEET) = 725.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 360.00 CHANNEL SLOPE = 0.2083
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 20.29
FLOW VELOCITY(FEET/SEC.) = 10.81 FLOW DEPTH(FEET) = 0.96
TRAVEL TIME(MIN.) = 0.56 Tc(MIN.) = 18.17
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1347.00 = 1686.00 FEET.

*****
FLOW PROCESS FROM NODE 1346.00 TO NODE 1347.00 IS CODE = 81
-----
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
-----
MAINLINE Tc(MIN) = 18.17
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.961
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp        Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER

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"GRASS" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 1.30 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 3.40 0.25 0.60 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 1.80 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.70
SUBAREA AREA (ACRES) = 6.90 SUBAREA RUNOFF (CFS) = 17.35
EFFECTIVE AREA (ACRES) = 14.90 AREA-AVERAGED Fm (INCH/HR) = 0.18
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.75
TOTAL AREA (ACRES) = 14.90 PEAK FLOW RATE (CFS) = 37.29

*****
FLOW PROCESS FROM NODE 1347.00 TO NODE 1348.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 725.00 DOWNSTREAM (FEET) = 675.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 205.00 CHANNEL SLOPE = 0.2439
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 37.29
FLOW VELOCITY (FEET/SEC.) = 13.05 FLOW DEPTH (FEET) = 0.96
TRAVEL TIME (MIN.) = 0.26 Tc (MIN.) = 18.43
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1348.00 = 1891.00 FEET.

*****
FLOW PROCESS FROM NODE 1347.00 TO NODE 1348.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 18.43
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.938
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 1.20 0.25 0.60 69
NATURAL FAIR COVER
"OPEN BRUSH" D 0.10 0.20 1.00 83
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 1.40 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.61
SUBAREA AREA (ACRES) = 2.70 SUBAREA RUNOFF (CFS) = 6.81
EFFECTIVE AREA (ACRES) = 17.60 AREA-AVERAGED Fm (INCH/HR) = 0.17
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.73
TOTAL AREA (ACRES) = 17.60 PEAK FLOW RATE (CFS) = 43.79

*****
FLOW PROCESS FROM NODE 1348.00 TO NODE 1349.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 675.00 DOWNSTREAM (FEET) = 655.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 81.00 CHANNEL SLOPE = 0.2469
CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
CHANNEL FLOW THRU SUBAREA (CFS) = 43.79
FLOW VELOCITY (FEET/SEC.) = 13.71 FLOW DEPTH (FEET) = 1.05
TRAVEL TIME (MIN.) = 0.10 Tc (MIN.) = 18.53
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1349.00 = 1972.00 FEET.

*****
FLOW PROCESS FROM NODE 1348.00 TO NODE 1349.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 18.53
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.930
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER

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"GRASS" C 2.60 0.25 1.00 79
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 2.50 0.25 0.60 69
NATURAL FAIR COVER
"GRASS" D 2.20 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 0.20 0.20 1.00 83
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 8.00 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.73
SUBAREA AREA (ACRES) = 15.50 SUBAREA RUNOFF (CFS) = 38.65
EFFECTIVE AREA (ACRES) = 33.10 AREA-AVERAGED Fm (INCH/HR) = 0.17
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.73
TOTAL AREA (ACRES) = 33.10 PEAK FLOW RATE (CFS) = 82.31

*****
FLOW PROCESS FROM NODE 1349.00 TO NODE 1350.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 655.00 DOWNSTREAM (FEET) = 650.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 303.00 CHANNEL SLOPE = 0.0165
CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
CHANNEL FLOW THRU SUBAREA (CFS) = 82.31
FLOW VELOCITY (FEET/SEC.) = 5.91 FLOW DEPTH (FEET) = 2.52
TRAVEL TIME (MIN.) = 0.85 Tc (MIN.) = 19.38
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1350.00 = 2275.00 FEET.

*****
FLOW PROCESS FROM NODE 1349.00 TO NODE 1350.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 19.38
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.855
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 3.00 0.25 0.60 69
NATURAL FAIR COVER
"GRASS" D 0.30 0.20 1.00 84
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 7.70 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.61
SUBAREA AREA (ACRES) = 11.00 SUBAREA RUNOFF (CFS) = 26.97
EFFECTIVE AREA (ACRES) = 44.10 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.70
TOTAL AREA (ACRES) = 44.10 PEAK FLOW RATE (CFS) = 107.04

*****
FLOW PROCESS FROM NODE 1350.00 TO NODE 1351.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 650.00 DOWNSTREAM (FEET) = 618.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 561.00 CHANNEL SLOPE = 0.0570
CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
CHANNEL FLOW THRU SUBAREA (CFS) = 107.04
FLOW VELOCITY (FEET/SEC.) = 9.99 FLOW DEPTH (FEET) = 2.10
TRAVEL TIME (MIN.) = 0.94 Tc (MIN.) = 20.32
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1351.00 = 2836.00 FEET.

*****
FLOW PROCESS FROM NODE 1350.00 TO NODE 1351.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 20.32
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.776
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN

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NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.10 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 0.20 0.25 1.00 79
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 8.10 0.25 0.60 69
NATURAL FAIR COVER
"WOODLAND" C 0.40 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 7.80 0.20 1.00 84
NATURAL FAIR COVER
"OPEN BRUSH" D 0.40 0.20 1.00 83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.81
SUBAREA AREA (ACRES) = 17.00 SUBAREA RUNOFF (CFS) = 39.74
EFFECTIVE AREA (ACRES) = 61.10 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.73
TOTAL AREA (ACRES) = 61.10 PEAK FLOW RATE (CFS) = 143.66

*****
FLOW PROCESS FROM NODE 1350.00 TO NODE 1351.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 20.32
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.776
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 10.10 0.20 0.60 75
NATURAL FAIR COVER
"WOODLAND" D 0.10 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
SUBAREA AREA (ACRES) = 10.20 SUBAREA RUNOFF (CFS) = 24.37
EFFECTIVE AREA (ACRES) = 71.30 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.71
TOTAL AREA (ACRES) = 71.30 PEAK FLOW RATE (CFS) = 168.04

*****
FLOW PROCESS FROM NODE 1351.00 TO NODE 1352.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 618.00 DOWNSTREAM (FEET) = 610.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 358.00 CHANNEL SLOPE = 0.0223
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 168.04
FLOW VELOCITY (FEET/SEC.) = 7.88 FLOW DEPTH (FEET) = 3.03
TRAVEL TIME (MIN.) = 0.76 Tc (MIN.) = 21.07
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1352.00 = 3194.00 FEET.

*****
FLOW PROCESS FROM NODE 1351.00 TO NODE 1352.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 21.07
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.718
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" B 5.10 0.30 1.00 69
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 2.10 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 1.90 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 2.10 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 22.30 0.25 0.60 69
NATURAL FAIR COVER
"WOODLAND" C 1.10 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26

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SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.74
SUBAREA AREA (ACRES) = 34.60 SUBAREA RUNOFF (CFS) = 78.64
EFFECTIVE AREA (ACRES) = 105.90 AREA-AVERAGED Fm (INCH/HR) = 0.17
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.72
TOTAL AREA (ACRES) = 105.90 PEAK FLOW RATE (CFS) = 242.99

*****
FLOW PROCESS FROM NODE 1351.00 TO NODE 1352.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 21.07
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.718
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" D 4.70 0.20 1.00 84
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 17.00 0.20 0.60 75
NATURAL FAIR COVER
"WOODLAND" D 1.50 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.71
SUBAREA AREA (ACRES) = 23.20 SUBAREA RUNOFF (CFS) = 53.81
EFFECTIVE AREA (ACRES) = 129.10 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.72
TOTAL AREA (ACRES) = 129.10 PEAK FLOW RATE (CFS) = 296.80

*****
FLOW PROCESS FROM NODE 1352.00 TO NODE 1353.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 610.00 DOWNSTREAM (FEET) = 600.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 576.00 CHANNEL SLOPE = 0.0174
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 296.80
FLOW VELOCITY (FEET/SEC.) = 8.28 FLOW DEPTH (FEET) = 3.99
TRAVEL TIME (MIN.) = 1.16 Tc (MIN.) = 22.23
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1353.00 = 3770.00 FEET.

*****
FLOW PROCESS FROM NODE 1352.00 TO NODE 1353.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 22.23
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.630
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 2.30 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 2.90 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 30.90 0.25 0.60 69
NATURAL FAIR COVER
"GRASS" D 0.40 0.20 1.00 84
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 13.30 0.20 0.60 75
NATURAL FAIR COVER
"WOODLAND" D 0.50 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.65
SUBAREA AREA (ACRES) = 50.30 SUBAREA RUNOFF (CFS) = 112.13
EFFECTIVE AREA (ACRES) = 179.40 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.70
TOTAL AREA (ACRES) = 179.40 PEAK FLOW RATE (CFS) = 398.70

*****
FLOW PROCESS FROM NODE 1353.00 TO NODE 1354.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

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ELEVATION DATA: UPSTREAM(FEET) = 600.00 DOWNSTREAM(FEET) = 580.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 852.00 CHANNEL SLOPE = 0.0235
CHANNEL BASE(FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 5.00
CHANNEL FLOW THRU SUBAREA(CFS) = 398.70
FLOW VELOCITY(FEET/SEC.) = 10.00 FLOW DEPTH(FEET) = 4.29
TRAVEL TIME(MIN.) = 1.42 Tc(MIN.) = 23.65
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1354.00 = 4622.00 FEET.

*****
FLOW PROCESS FROM NODE 1353.00 TO NODE 1354.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 23.65
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.541
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 1.50 0.30 0.60 56
NATURAL FAIR COVER
"GRASS" C 2.70 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 3.00 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 64.80 0.25 0.60 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 6.40 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.63
SUBAREA AREA(ACRES) = 78.40 SUBAREA RUNOFF(CFS) = 168.31
EFFECTIVE AREA(ACRES) = 257.80 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.68
TOTAL AREA(ACRES) = 257.80 PEAK FLOW RATE(CFS) = 552.56

*****
FLOW PROCESS FROM NODE 1354.00 TO NODE 1355.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 580.00 DOWNSTREAM(FEET) = 528.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1057.00 CHANNEL SLOPE = 0.0492
CHANNEL BASE(FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 5.00
CHANNEL FLOW THRU SUBAREA(CFS) = 552.56
FLOW VELOCITY(FEET/SEC.) = 14.31 FLOW DEPTH(FEET) = 4.20
TRAVEL TIME(MIN.) = 1.23 Tc(MIN.) = 24.88
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1355.00 = 5679.00 FEET.

*****
FLOW PROCESS FROM NODE 1354.00 TO NODE 1355.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 24.88
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.467
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 4.90 0.30 0.60 56
NATURAL FAIR COVER
"GRASS" C 0.20 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.50 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 29.40 0.25 0.60 69
NATURAL FAIR COVER
"WOODLAND" C 0.40 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 1.40 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.63
SUBAREA AREA(ACRES) = 36.80 SUBAREA RUNOFF(CFS) = 76.44
EFFECTIVE AREA(ACRES) = 294.60 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.67

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TOTAL AREA(ACRES) = 294.60 PEAK FLOW RATE(CFS) = 611.86

*****
FLOW PROCESS FROM NODE 1354.00 TO NODE 1355.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 24.88
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.467
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 0.30 0.20 0.60 75
NATURAL FAIR COVER
"WOODLAND" D 0.90 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.90
SUBAREA AREA(ACRES) = 1.20 SUBAREA RUNOFF(CFS) = 2.47
EFFECTIVE AREA(ACRES) = 295.80 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.67
TOTAL AREA(ACRES) = 295.80 PEAK FLOW RATE(CFS) = 614.33

*****
FLOW PROCESS FROM NODE 1355.00 TO NODE 1356.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 528.00 DOWNSTREAM(FEET) = 470.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1455.00 CHANNEL SLOPE = 0.0399
CHANNEL BASE(FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 5.00
CHANNEL FLOW THRU SUBAREA(CFS) = 614.33
FLOW VELOCITY(FEET/SEC.) = 13.59 FLOW DEPTH(FEET) = 4.67
TRAVEL TIME(MIN.) = 1.78 Tc(MIN.) = 26.67
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1356.00 = 7134.00 FEET.

*****
FLOW PROCESS FROM NODE 1355.00 TO NODE 1356.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 26.67
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.373
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 4.30 0.30 0.60 56
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 1.90 0.25 1.00 75
NATURAL FAIR COVER
"OPEN BRUSH" C 0.20 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 48.70 0.25 0.60 69
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.20 0.20 1.00 81
NATURAL FAIR COVER
"GRASS" D 1.00 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.62
SUBAREA AREA(ACRES) = 56.30 SUBAREA RUNOFF(CFS) = 112.29
EFFECTIVE AREA(ACRES) = 352.10 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.66
TOTAL AREA(ACRES) = 352.10 PEAK FLOW RATE(CFS) = 701.68

*****
FLOW PROCESS FROM NODE 1355.00 TO NODE 1356.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
=====
MAINLINE Tc(MIN) = 26.67
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.373
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL

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"3-4 DWELLINGS/ACRE" D 2.60 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
SUBAREA AREA (ACRES) = 2.60 SUBAREA RUNOFF (CFS) = 5.27
EFFECTIVE AREA (ACRES) = 354.70 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.66
TOTAL AREA (ACRES) = 354.70 PEAK FLOW RATE (CFS) = 706.95

*****
FLOW PROCESS FROM NODE 1356.00 TO NODE 1371.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 470.00 DOWNSTREAM (FEET) = 415.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1649.00 CHANNEL SLOPE = 0.0334
CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
CHANNEL FLOW THRU SUBAREA (CFS) = 706.95
FLOW VELOCITY (FEET/SEC.) = 13.14 FLOW DEPTH (FEET) = 4.92
TRAVEL TIME (MIN.) = 2.09 Tc (MIN.) = 28.76
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1371.00 = 8783.00 FEET.

*****
FLOW PROCESS FROM NODE 1356.00 TO NODE 1371.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 28.76
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.275
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 4.40 0.30 0.60 56
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.50 0.25 1.00 75
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 39.40 0.25 0.60 69
NATURAL FAIR COVER
"GRASS" D 0.10 0.20 1.00 84
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 3.80 0.20 0.60 75
NATURAL FAIR COVER
"WOODLAND" D 0.20 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.61
SUBAREA AREA (ACRES) = 48.40 SUBAREA RUNOFF (CFS) = 92.47
EFFECTIVE AREA (ACRES) = 403.10 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.66
TOTAL AREA (ACRES) = 403.10 PEAK FLOW RATE (CFS) = 767.93

*****
FLOW PROCESS FROM NODE 1371.00 TO NODE 1371.00 IS CODE = 1
-----
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
-----
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
TIME OF CONCENTRATION (MIN.) = 28.76
RAINFALL INTENSITY (INCH/HR) = 2.27
AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.24
AREA-AVERAGED Ap = 0.66
EFFECTIVE STREAM AREA (ACRES) = 403.10
TOTAL STREAM AREA (ACRES) = 403.10
PEAK FLOW RATE (CFS) AT CONFLUENCE = 767.93

*****
FLOW PROCESS FROM NODE 1360.00 TO NODE 1361.00 IS CODE = 21
-----
>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<
>>>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
-----
INITIAL SUBAREA FLOW-LENGTH (FEET) = 325.00
ELEVATION DATA: UPSTREAM (FEET) = 1110.00 DOWNSTREAM (FEET) = 1050.00
Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20

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SUBAREA ANALYSIS USED MINIMUM Tc (MIN.) = 10.007
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.159
SUBAREA Tc AND LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
NATURAL FAIR COVER
"GRASS" C 0.30 0.25 1.00 79 10.01
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA RUNOFF (CFS) = 1.06
TOTAL AREA (ACRES) = 0.30 PEAK FLOW RATE (CFS) = 1.06

*****
FLOW PROCESS FROM NODE 1361.00 TO NODE 1362.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 1050.00 DOWNSTREAM (FEET) = 1025.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 88.00 CHANNEL SLOPE = 0.2841
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 1.06
FLOW VELOCITY (FEET/SEC.) = 5.21 FLOW DEPTH (FEET) = 0.17
TRAVEL TIME (MIN.) = 0.28 Tc (MIN.) = 10.29
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1362.00 = 413.00 FEET.

*****
FLOW PROCESS FROM NODE 1361.00 TO NODE 1362.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 10.29
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.102
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.20 0.25 1.00 79
NATURAL FAIR COVER
"GRASS" D 0.30 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA (ACRES) = 0.50 SUBAREA RUNOFF (CFS) = 1.75
EFFECTIVE AREA (ACRES) = 0.80 AREA-AVERAGED Fm (INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA (ACRES) = 0.80 PEAK FLOW RATE (CFS) = 2.79

*****
FLOW PROCESS FROM NODE 1362.00 TO NODE 1363.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 1025.00 DOWNSTREAM (FEET) = 1000.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 99.00 CHANNEL SLOPE = 0.2525
CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
CHANNEL FLOW THRU SUBAREA (CFS) = 2.79
FLOW VELOCITY (FEET/SEC.) = 6.71 FLOW DEPTH (FEET) = 0.32
TRAVEL TIME (MIN.) = 0.25 Tc (MIN.) = 10.53
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1363.00 = 512.00 FEET.

*****
FLOW PROCESS FROM NODE 1362.00 TO NODE 1363.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 10.53
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.053
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.50 0.25 1.00 79
NATURAL FAIR COVER
"GRASS" D 0.60 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00

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SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 3.79
EFFECTIVE AREA(ACRES) = 1.90 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 1.90 PEAK FLOW RATE(CFS) = 6.54

*****
FLOW PROCESS FROM NODE 1363.00 TO NODE 1364.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 1000.00 DOWNSTREAM(FEET) = 950.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 122.00 CHANNEL SLOPE = 0.4098
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 6.54
FLOW VELOCITY(FEET/SEC.) = 10.34 FLOW DEPTH(FEET) = 0.44
TRAVEL TIME(MIN.) = 0.20 Tc(MIN.) = 10.73
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1364.00 = 634.00 FEET.

*****
FLOW PROCESS FROM NODE 1363.00 TO NODE 1364.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 10.73
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.014
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.10 0.25 1.00 77
NATURAL FAIR COVER
"GRASS" D 0.60 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 3.75
EFFECTIVE AREA(ACRES) = 3.00 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 3.00 PEAK FLOW RATE(CFS) = 10.23

*****
FLOW PROCESS FROM NODE 1364.00 TO NODE 1365.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 950.00 DOWNSTREAM(FEET) = 875.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 205.00 CHANNEL SLOPE = 0.3659
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 10.23
FLOW VELOCITY(FEET/SEC.) = 11.09 FLOW DEPTH(FEET) = 0.58
TRAVEL TIME(MIN.) = 0.31 Tc(MIN.) = 11.04
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1365.00 = 839.00 FEET.

*****
FLOW PROCESS FROM NODE 1364.00 TO NODE 1365.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 11.04
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.952
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.50 0.25 1.00 77
NATURAL FAIR COVER
"GRASS" D 0.30 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 1.20 SUBAREA RUNOFF(CFS) = 4.01
EFFECTIVE AREA(ACRES) = 4.20 AREA-AVERAGED Fm(INCH/HR) = 0.23

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AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 4.20 PEAK FLOW RATE(CFS) = 14.08

*****
FLOW PROCESS FROM NODE 1365.00 TO NODE 1366.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 875.00 DOWNSTREAM(FEET) = 850.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 146.00 CHANNEL SLOPE = 0.1712
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 14.08
FLOW VELOCITY(FEET/SEC.) = 9.16 FLOW DEPTH(FEET) = 0.84
TRAVEL TIME(MIN.) = 0.27 Tc(MIN.) = 11.30
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1366.00 = 985.00 FEET.

*****
FLOW PROCESS FROM NODE 1365.00 TO NODE 1366.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 11.30
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.899
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 1.20 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 1.20 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 0.10 0.25 0.60 69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
SUBAREA AREA(ACRES) = 2.50 SUBAREA RUNOFF(CFS) = 8.22
EFFECTIVE AREA(ACRES) = 6.70 AREA-AVERAGED Fm(INCH/HR) = 0.24
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.99
TOTAL AREA(ACRES) = 6.70 PEAK FLOW RATE(CFS) = 22.09

*****
FLOW PROCESS FROM NODE 1366.00 TO NODE 1367.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 850.00 DOWNSTREAM(FEET) = 700.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 545.00 CHANNEL SLOPE = 0.2752
CHANNEL BASE(FEET) = 1.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
CHANNEL FLOW THRU SUBAREA(CFS) = 22.09
FLOW VELOCITY(FEET/SEC.) = 12.20 FLOW DEPTH(FEET) = 0.94
TRAVEL TIME(MIN.) = 0.74 Tc(MIN.) = 12.05
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1367.00 = 1530.00 FEET.

*****
FLOW PROCESS FROM NODE 1366.00 TO NODE 1367.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 12.05
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.750
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.50 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.60 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 3.10 0.25 0.60 69
NATURAL FAIR COVER
"WOODLAND" C 0.40 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.73
SUBAREA AREA(ACRES) = 4.60 SUBAREA RUNOFF(CFS) = 14.77
EFFECTIVE AREA(ACRES) = 11.30 AREA-AVERAGED Fm(INCH/HR) = 0.21

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AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.89
TOTAL AREA(ACRES) = 11.30 PEAK FLOW RATE(CFS) = 35.97
*****
FLOW PROCESS FROM NODE 1367.00 TO NODE 1368.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 700.00 DOWNSTREAM(FEET) = 586.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 607.00 CHANNEL SLOPE = 0.1878
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 35.97
FLOW VELOCITY(FEET/SEC.) = 11.80 FLOW DEPTH(FEET) = 1.01
TRAVEL TIME(MIN.) = 0.86 Tc(MIN.) = 12.91
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1368.00 = 2137.00 FEET.
*****
FLOW PROCESS FROM NODE 1367.00 TO NODE 1368.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 12.91
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.602
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 0.20 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.30 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 8.00 0.25 0.60 69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.62
SUBAREA AREA(ACRES) = 8.50 SUBAREA RUNOFF(CFS) = 26.36
EFFECTIVE AREA(ACRES) = 19.80 AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.77
TOTAL AREA(ACRES) = 19.80 PEAK FLOW RATE(CFS) = 60.81
*****
FLOW PROCESS FROM NODE 1368.00 TO NODE 1369.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 586.00 DOWNSTREAM(FEET) = 438.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1496.00 CHANNEL SLOPE = 0.0989
CHANNEL BASE(FEET) = 2.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
CHANNEL FLOW THRU SUBAREA(CFS) = 60.81
FLOW VELOCITY(FEET/SEC.) = 10.71 FLOW DEPTH(FEET) = 1.58
TRAVEL TIME(MIN.) = 2.33 Tc(MIN.) = 15.23
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1369.00 = 3633.00 FEET.
*****
FLOW PROCESS FROM NODE 1368.00 TO NODE 1369.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 15.23
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.274
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 1.10 0.30 0.60 56
NATURAL FAIR COVER
"GRASS" C 1.30 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 0.70 0.25 1.00 77
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 21.30 0.25 0.60 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 5.90 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.63
SUBAREA AREA(ACRES) = 30.30 SUBAREA RUNOFF(CFS) = 85.14

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EFFECTIVE AREA(ACRES) = 50.10 AREA-AVERAGED Fm(INCH/HR) = 0.17
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.68
TOTAL AREA(ACRES) = 50.10 PEAK FLOW RATE(CFS) = 140.11
*****
FLOW PROCESS FROM NODE 1369.00 TO NODE 1370.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 438.00 DOWNSTREAM(FEET) = 422.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 1128.00 CHANNEL SLOPE = 0.0142
CHANNEL BASE(FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 4.00
CHANNEL FLOW THRU SUBAREA(CFS) = 140.11
FLOW VELOCITY(FEET/SEC.) = 6.36 FLOW DEPTH(FEET) = 3.10
TRAVEL TIME(MIN.) = 2.95 Tc(MIN.) = 18.19
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1370.00 = 4761.00 FEET.
*****
FLOW PROCESS FROM NODE 1369.00 TO NODE 1370.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 18.19
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.959
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" B 1.60 0.30 1.00 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 13.80 0.30 0.60 56
NATURAL FAIR COVER
"GRASS" C 9.90 0.25 1.00 79
NATURAL FAIR COVER
"OPEN BRUSH" C 1.50 0.25 1.00 77
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 12.20 0.25 0.20 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 120.50 0.25 0.60 69
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
SUBAREA AREA(ACRES) = 159.50 SUBAREA RUNOFF(CFS) = 402.79
EFFECTIVE AREA(ACRES) = 209.60 AREA-AVERAGED Fm(INCH/HR) = 0.16
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.62
TOTAL AREA(ACRES) = 209.60 PEAK FLOW RATE(CFS) = 528.72
*****
FLOW PROCESS FROM NODE 1369.00 TO NODE 1370.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 18.19
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.959
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" C 0.60 0.25 1.00 73
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 15.00 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.62
SUBAREA AREA(ACRES) = 15.60 SUBAREA RUNOFF(CFS) = 39.80
EFFECTIVE AREA(ACRES) = 225.20 AREA-AVERAGED Fm(INCH/HR) = 0.15
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.62
TOTAL AREA(ACRES) = 225.20 PEAK FLOW RATE(CFS) = 568.52
*****
FLOW PROCESS FROM NODE 1370.00 TO NODE 1371.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 422.00 DOWNSTREAM(FEET) = 415.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 756.00 CHANNEL SLOPE = 0.0093
CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000

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MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00
CHANNEL FLOW THRU SUBAREA (CFS) = 568.52
FLOW VELOCITY (FEET/SEC.) = 7.70 FLOW DEPTH (FEET) = 5.78
TRAVEL TIME (MIN.) = 1.64 Tc (MIN.) = 19.82
LONGEST FLOWPATH FROM NODE 1360.00 TO NODE 1371.00 = 5517.00 FEET.

FLOW PROCESS FROM NODE 1370.00 TO NODE 1371.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 19.82
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.815
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 14.70 0.30 0.60 56
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 29.20 0.25 0.60 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 2.00 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
SUBAREA AREA (ACRES) = 45.90 SUBAREA RUNOFF (CFS) = 109.77
EFFECTIVE AREA (ACRES) = 271.10 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.62
TOTAL AREA (ACRES) = 271.10 PEAK FLOW RATE (CFS) = 649.10

FLOW PROCESS FROM NODE 1371.00 TO NODE 1371.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<

TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
TIME OF CONCENTRATION (MIN.) = 19.82
RAINFALL INTENSITY (INCH/HR) = 2.82
AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.25
AREA-AVERAGED Ap = 0.62
EFFECTIVE STREAM AREA (ACRES) = 271.10
TOTAL STREAM AREA (ACRES) = 271.10
PEAK FLOW RATE (CFS) AT CONFLUENCE = 649.10

** CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp (Fm) (INCH/HR)	Ap (ACRES)	Ae (ACRES)	HEADWATER NODE
1	767.93	28.76	2.275	0.24 (0.16)	0.66	403.1	1340.00
2	649.10	19.82	2.815	0.25 (0.16)	0.62	271.1	1360.00

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp (Fm) (INCH/HR)	Ap (ACRES)	Ae (ACRES)	HEADWATER NODE
1	1313.70	19.82	2.815	0.25 (0.16)	0.64	549.0	1360.00
2	1285.06	28.76	2.275	0.24 (0.16)	0.64	674.2	1340.00

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE (CFS) = 1313.70 Tc (MIN.) = 19.82
EFFECTIVE AREA (ACRES) = 548.96 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.64
TOTAL AREA (ACRES) = 674.20
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1371.00 = 8783.00 FEET.

FLOW PROCESS FROM NODE 1371.00 TO NODE 1372.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 415.00 DOWNSTREAM (FEET) = 402.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1049.00 CHANNEL SLOPE = 0.0124
CHANNEL BASE (FEET) = 8.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 8.00

CHANNEL FLOW THRU SUBAREA (CFS) = 1313.70
FLOW VELOCITY (FEET/SEC.) = 10.61 FLOW DEPTH (FEET) = 7.82
TRAVEL TIME (MIN.) = 1.65 Tc (MIN.) = 21.47
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1372.00 = 9832.00 FEET.

FLOW PROCESS FROM NODE 1371.00 TO NODE 1372.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 21.47
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.688
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 12.80 0.30 0.60 56
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 21.30 0.25 0.60 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 8.80 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
SUBAREA AREA (ACRES) = 42.90 SUBAREA RUNOFF (CFS) = 97.89
EFFECTIVE AREA (ACRES) = 591.86 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.64
TOTAL AREA (ACRES) = 717.10 PEAK FLOW RATE (CFS) = 1348.67

FLOW PROCESS FROM NODE 1372.00 TO NODE 1373.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 402.00 DOWNSTREAM (FEET) = 325.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1429.00 CHANNEL SLOPE = 0.0539
CHANNEL BASE (FEET) = 8.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 8.00
CHANNEL FLOW THRU SUBAREA (CFS) = 1348.67
FLOW VELOCITY (FEET/SEC.) = 18.43 FLOW DEPTH (FEET) = 5.44
TRAVEL TIME (MIN.) = 1.29 Tc (MIN.) = 22.76
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1373.00 = 11261.00 FEET.

FLOW PROCESS FROM NODE 1372.00 TO NODE 1373.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 22.76
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.594
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL POOR COVER
"BARREN" B 0.50 0.30 1.00 86
NATURAL FAIR COVER
"GRASS" B 0.70 0.30 1.00 69
NATURAL FAIR COVER
"OPEN BRUSH" B 0.20 0.30 1.00 66
RESIDENTIAL
"3-4 DWELLINGS/ACRE" B 5.50 0.30 0.60 56
NATURAL FAIR COVER
"WOODLAND" B 4.00 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C 0.20 0.25 1.00 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.80
SUBAREA AREA (ACRES) = 11.10 SUBAREA RUNOFF (CFS) = 23.52
EFFECTIVE AREA (ACRES) = 602.96 AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.64
TOTAL AREA (ACRES) = 728.20 PEAK FLOW RATE (CFS) = 1348.67
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 1372.00 TO NODE 1373.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 22.76

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* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.594
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
RESIDENTIAL
"11+ DWELLINGS/ACRE"    C      1.50     0.25     0.20     69
NATURAL FAIR COVER
"OPEN BRUSH"            C      0.60     0.25     1.00     77
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    C      8.90     0.25     0.60     69
NATURAL FAIR COVER
"WOODLAND"              C      0.60     0.25     1.00     73
NATURAL FAIR COVER
"GRASS"                  D      0.40     0.20     1.00     84
RESIDENTIAL
"11+ DWELLINGS/ACRE"    D      0.50     0.20     0.20     75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.59
SUBAREA AREA (ACRES) = 12.50  SUBAREA RUNOFF (CFS) = 27.56
EFFECTIVE AREA (ACRES) = 615.46  AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.64
TOTAL AREA (ACRES) = 740.70  PEAK FLOW RATE (CFS) = 1349.69

*****
FLOW PROCESS FROM NODE 1372.00 TO NODE 1373.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 22.76
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.594
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    D      0.40     0.20     0.60     75
NATURAL FAIR COVER
"WOODLAND"              D      2.90     0.20     1.00     79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.95
SUBAREA AREA (ACRES) = 3.30  SUBAREA RUNOFF (CFS) = 7.14
EFFECTIVE AREA (ACRES) = 618.76  AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.64
TOTAL AREA (ACRES) = 744.00  PEAK FLOW RATE (CFS) = 1356.83

*****
FLOW PROCESS FROM NODE 1373.00 TO NODE 1374.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 325.00  DOWNSTREAM (FEET) = 290.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1774.00  CHANNEL SLOPE = 0.0197
CHANNEL BASE (FEET) = 8.00  "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040  MAXIMUM DEPTH (FEET) = 8.00
CHANNEL FLOW THRU SUBAREA (CFS) = 1356.83
FLOW VELOCITY (FEET/SEC.) = 12.72  FLOW DEPTH (FEET) = 7.08
TRAVEL TIME (MIN.) = 2.32  Tc (MIN.) = 25.09
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1374.00 = 13035.00 FEET.

*****
FLOW PROCESS FROM NODE 1373.00 TO NODE 1374.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 25.09
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.455
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                  B      2.80     0.30     1.00     69
COMMERCIAL                B      0.10     0.30     0.10     56
PUBLIC PARK                B      0.20     0.30     0.85     56
RESIDENTIAL
"11+ DWELLINGS/ACRE"    B      13.70    0.30     0.20     56
NATURAL FAIR COVER
"OPEN BRUSH"            B      0.40     0.30     1.00     66
RESIDENTIAL

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"3-4 DWELLINGS/ACRE"    B      0.30     0.30     0.60     56
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.36
SUBAREA AREA (ACRES) = 17.50  SUBAREA RUNOFF (CFS) = 36.97
EFFECTIVE AREA (ACRES) = 636.26  AREA-AVERAGED Fm (INCH/HR) = 0.16
AREA-AVERAGED Fp (INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.63
TOTAL AREA (ACRES) = 761.50  PEAK FLOW RATE (CFS) = 1356.83
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1373.00 TO NODE 1374.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 25.09
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.455
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"WOODLAND"              B      2.30     0.30     1.00     60
NATURAL FAIR COVER
"GRASS"                  C      0.80     0.25     1.00     79
RESIDENTIAL
"11+ DWELLINGS/ACRE"    C      38.30    0.25     0.20     69
NATURAL FAIR COVER
"OPEN BRUSH"            C      1.40     0.25     1.00     77
RESIDENTIAL
"3-4 DWELLINGS/ACRE"    C      0.20     0.25     0.60     69
NATURAL FAIR COVER
"WOODLAND"              C      1.80     0.25     1.00     73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.31
SUBAREA AREA (ACRES) = 44.80  SUBAREA RUNOFF (CFS) = 95.73
EFFECTIVE AREA (ACRES) = 681.06  AREA-AVERAGED Fm (INCH/HR) = 0.15
AREA-AVERAGED Fp (INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.61
TOTAL AREA (ACRES) = 806.30  PEAK FLOW RATE (CFS) = 1412.27

*****
FLOW PROCESS FROM NODE 1373.00 TO NODE 1374.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 25.09
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.455
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/      SCS SOIL  AREA      Fp      Ap      SCS
LAND USE                GROUP  (ACRES)  (INCH/HR)  (DECIMAL)  CN
NATURAL FAIR COVER
"GRASS"                  D      3.00     0.20     1.00     84
COMMERCIAL                D      0.20     0.20     0.10     75
PUBLIC PARK                D      1.10     0.20     0.85     75
RESIDENTIAL
"11+ DWELLINGS/ACRE"    D      4.20     0.20     0.20     75
NATURAL FAIR COVER
"OPEN BRUSH"            D      0.20     0.20     1.00     83
NATURAL FAIR COVER
"WOODLAND"              D      2.10     0.20     1.00     79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.66
SUBAREA AREA (ACRES) = 10.80  SUBAREA RUNOFF (CFS) = 22.59
EFFECTIVE AREA (ACRES) = 691.86  AREA-AVERAGED Fm (INCH/HR) = 0.15
AREA-AVERAGED Fp (INCH/HR) = 0.25  AREA-AVERAGED Ap = 0.61
TOTAL AREA (ACRES) = 817.10  PEAK FLOW RATE (CFS) = 1434.85

*****
FLOW PROCESS FROM NODE 1374.00 TO NODE 1375.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 290.00  DOWNSTREAM (FEET) = 240.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 681.00  CHANNEL SLOPE = 0.0734
CHANNEL BASE (FEET) = 8.00  "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040  MAXIMUM DEPTH (FEET) = 8.00
CHANNEL FLOW THRU SUBAREA (CFS) = 1434.85
FLOW VELOCITY (FEET/SEC.) = 21.00  FLOW DEPTH (FEET) = 5.18
TRAVEL TIME (MIN.) = 0.54  Tc (MIN.) = 25.63
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1375.00 = 13716.00 FEET.

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*****
FLOW PROCESS FROM NODE 1374.00 TO NODE 1375.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 25.63
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.427
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"        A         0.10   0.40   1.00  46
NATURAL FAIR COVER
"OPEN BRUSH"        B         0.10   0.30   1.00  66
NATURAL FAIR COVER
"GRASS"             C         0.50   0.25   1.00  79
NATURAL FAIR COVER
"OPEN BRUSH"        C         0.50   0.25   1.00  77
COMMERCIAL          C         0.60   0.25   0.10  69
NATURAL FAIR COVER
"WOODLAND"          C         1.50   0.25   1.00  73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.84
SUBAREA AREA(ACRES) = 3.30 SUBAREA RUNOFF(CFS) = 6.57
EFFECTIVE AREA(ACRES) = 695.16 AREA-AVERAGED Fm(INCH/HR) = 0.15
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.61
TOTAL AREA(ACRES) = 820.40 PEAK FLOW RATE(CFS) = 1434.85
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1374.00 TO NODE 1375.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 25.63
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.427
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
PUBLIC PARK         D         0.10   0.20   0.85  75
NATURAL FAIR COVER
"OPEN BRUSH"        D         2.10   0.20   1.00  83
COMMERCIAL          D         0.20   0.20   0.10  75
NATURAL FAIR COVER
"WOODLAND"          D         0.20   0.20   1.00  79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
SUBAREA AREA(ACRES) = 2.60 SUBAREA RUNOFF(CFS) = 5.25
EFFECTIVE AREA(ACRES) = 697.76 AREA-AVERAGED Fm(INCH/HR) = 0.15
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.61
TOTAL AREA(ACRES) = 823.00 PEAK FLOW RATE(CFS) = 1434.85
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1375.00 TO NODE 1375.00 IS CODE = 11
-----
>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<
-----
** MAIN STREAM CONFLUENCE DATA **
STREAM  Q   Tc  Intensity  Fp(Fm)  Ap  Ae  HEADWATER
NUMBER  (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1  1434.85  25.63  2.427  0.25( 0.15)  0.61  697.8  1360.00
2  1407.61  34.59  2.046  0.25( 0.15)  0.62  823.0  1340.00
LONGEST FLOWPATH FROM NODE 1340.00 TO NODE 1375.00 = 13716.00 FEET.

** MEMORY BANK # 1 CONFLUENCE DATA **
STREAM  Q   Tc  Intensity  Fp(Fm)  Ap  Ae  HEADWATER
NUMBER  (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1  3900.76  33.06  2.104  0.25( 0.20)  0.80  2277.2  1300.00
2  3574.16  45.27  1.759  0.25( 0.19)  0.77  2535.5  1320.00
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1375.00 = 22215.00 FEET.

** PEAK FLOW RATE TABLE **
STREAM  Q   Tc  Intensity  Fp(Fm)  Ap  Ae  HEADWATER
NUMBER  (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1  4972.97  25.63  2.427  0.25( 0.19)  0.74  2463.2  1360.00
2  5313.03  33.06  2.104  0.25( 0.19)  0.75  3078.8  1300.00

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3  5267.41  34.59  2.046  0.25( 0.19)  0.75  3132.6  1340.00
4  4768.56  45.27  1.759  0.25( 0.18)  0.73  3358.5  1320.00
TOTAL AREA(ACRES) = 3358.50

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) = 5313.03 Tc(MIN.) = 33.059
EFFECTIVE AREA(ACRES) = 3078.81 AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.75
TOTAL AREA(ACRES) = 3358.50
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1375.00 = 22215.00 FEET.

*****
FLOW PROCESS FROM NODE 1375.00 TO NODE 1375.00 IS CODE = 12
-----
>>>>CLEAR MEMORY BANK # 1 <<<<
-----
*****
FLOW PROCESS FROM NODE 1375.00 TO NODE 1395.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM(FEET) = 240.00 DOWNSTREAM(FEET) = 216.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 3182.00 CHANNEL SLOPE = 0.0075
CHANNEL BASE(FEET) = 85.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 15.00
CHANNEL FLOW THRU SUBAREA(CFS) = 5313.03
FLOW VELOCITY(FEET/SEC.) = 11.45 FLOW DEPTH(FEET) = 4.90
TRAVEL TIME(MIN.) = 4.63 Tc(MIN.) = 37.69
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1395.00 = 25397.00 FEET.

*****
FLOW PROCESS FROM NODE 1375.00 TO NODE 1395.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 37.69
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.949
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
PUBLIC PARK         A         5.40   0.40   0.85  32
NATURAL POOR COVER
"BARREN"           A         0.20   0.40   1.00  78
NATURAL FAIR COVER
"GRASS"            A         0.20   0.40   1.00  50
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" A         40.70  0.40   1.00  49
NATURAL FAIR COVER
"OPEN BRUSH"       A         2.40   0.40   1.00  46
RESIDENTIAL
"11+ DWELLINGS/ACRE" A         0.60   0.40   0.20  32
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.97
SUBAREA AREA(ACRES) = 49.50 SUBAREA RUNOFF(CFS) = 69.48
EFFECTIVE AREA(ACRES) = 3128.31 AREA-AVERAGED Fm(INCH/HR) = 0.19
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.75
TOTAL AREA(ACRES) = 3408.00 PEAK FLOW RATE(CFS) = 5313.03
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1375.00 TO NODE 1395.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc(MIN) = 37.69
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.949
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP   (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" A         0.70   0.40   1.00  40
NATURAL FAIR COVER
"WOODLAND"         A         0.40   0.40   1.00  36
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" C         3.50   0.25   1.00  75
NATURAL FAIR COVER
"GRASS"            C         0.80   0.25   1.00  79

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NATURAL FAIR COVER
 "OPEN BRUSH" C 3.00 0.25 1.00 77
 COMMERCIAL C 2.70 0.25 0.10 69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.78
 SUBAREA AREA (ACRES) = 11.10 SUBAREA RUNOFF (CFS) = 17.37
 EFFECTIVE AREA (ACRES) = 3139.41 AREA-AVERAGED Fm (INCH/HR) = 0.19
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.75
 TOTAL AREA (ACRES) = 3419.10 PEAK FLOW RATE (CFS) = 5313.03
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 1375.00 TO NODE 1395.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 37.69
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.949
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND" C 11.70 0.25 1.00 73
 PUBLIC PARK D 20.40 0.20 0.85 75
 NATURAL FAIR COVER
 "GRASS" D 4.20 0.20 1.00 84
 URBAN FAIR COVER
 "TURF" D 0.20 0.20 1.00 82
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 0.30 0.20 1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH" D 6.10 0.20 1.00 83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
 SUBAREA AREA (ACRES) = 42.90 SUBAREA RUNOFF (CFS) = 67.56
 EFFECTIVE AREA (ACRES) = 3182.31 AREA-AVERAGED Fm (INCH/HR) = 0.19
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.76
 TOTAL AREA (ACRES) = 3462.00 PEAK FLOW RATE (CFS) = 5313.03
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

 FLOW PROCESS FROM NODE 1395.00 TO NODE 1395.00 IS CODE = 1

>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<

 TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 TIME OF CONCENTRATION (MIN.) = 37.69
 RAINFALL INTENSITY (INCH/HR) = 1.95
 AREA-AVERAGED Fm (INCH/HR) = 0.19
 AREA-AVERAGED Fp (INCH/HR) = 0.25
 AREA-AVERAGED Ap = 0.76
 EFFECTIVE STREAM AREA (ACRES) = 3182.31
 TOTAL STREAM AREA (ACRES) = 3462.00
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 5313.03

 FLOW PROCESS FROM NODE 1380.00 TO NODE 1381.00 IS CODE = 21

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<

 INITIAL SUBAREA FLOW-LENGTH (FEET) = 295.00
 ELEVATION DATA: UPSTREAM (FEET) = 970.00 DOWNSTREAM (FEET) = 960.00
 Tc = K * [(LENGTH** 3.00) / (ELEVATION CHANGE)]** 0.20
 SUBAREA ANALYSIS USED MINIMUM Tc (MIN.) = 6.201
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.570
 SUBAREA Tc AND LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS Tc
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 RESIDENTIAL
 "11+ DWELLINGS/ACRE" D 1.30 0.20 0.20 75 6.20
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.20
 SUBAREA RUNOFF (CFS) = 6.47
 TOTAL AREA (ACRES) = 1.30 PEAK FLOW RATE (CFS) = 6.47

FLOW PROCESS FROM NODE 1381.00 TO NODE 1382.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

 ELEVATION DATA: UPSTREAM (FEET) = 960.00 DOWNSTREAM (FEET) = 907.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 424.00 CHANNEL SLOPE = 0.1250
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 6.47
 FLOW VELOCITY (FEET/SEC.) = 6.63 FLOW DEPTH (FEET) = 0.61
 TRAVEL TIME (MIN.) = 1.07 Tc (MIN.) = 7.27
 LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1382.00 = 719.00 FEET.

 FLOW PROCESS FROM NODE 1381.00 TO NODE 1382.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 7.27
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.020
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "11+ DWELLINGS/ACRE" D 5.80 0.20 0.20 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.20
 SUBAREA AREA (ACRES) = 5.80 SUBAREA RUNOFF (CFS) = 26.00
 EFFECTIVE AREA (ACRES) = 7.10 AREA-AVERAGED Fm (INCH/HR) = 0.04
 AREA-AVERAGED Fp (INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.20
 TOTAL AREA (ACRES) = 7.10 PEAK FLOW RATE (CFS) = 31.82

 FLOW PROCESS FROM NODE 1382.00 TO NODE 1383.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

 ELEVATION DATA: UPSTREAM (FEET) = 907.00 DOWNSTREAM (FEET) = 903.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 295.00 CHANNEL SLOPE = 0.0136
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 31.82
 FLOW VELOCITY (FEET/SEC.) = 4.33 FLOW DEPTH (FEET) = 1.89
 TRAVEL TIME (MIN.) = 1.14 Tc (MIN.) = 8.40
 LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1383.00 = 1014.00 FEET.

 FLOW PROCESS FROM NODE 1382.00 TO NODE 1383.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<

 MAINLINE Tc (MIN) = 8.40
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.633
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
 LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "11+ DWELLINGS/ACRE" D 6.00 0.20 0.20 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.20
 SUBAREA AREA (ACRES) = 6.00 SUBAREA RUNOFF (CFS) = 24.80
 EFFECTIVE AREA (ACRES) = 13.10 AREA-AVERAGED Fm (INCH/HR) = 0.04
 AREA-AVERAGED Fp (INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.20
 TOTAL AREA (ACRES) = 13.10 PEAK FLOW RATE (CFS) = 54.15

 FLOW PROCESS FROM NODE 1383.00 TO NODE 1384.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<

 ELEVATION DATA: UPSTREAM (FEET) = 903.00 DOWNSTREAM (FEET) = 900.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 247.00 CHANNEL SLOPE = 0.0121
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 54.15
 FLOW VELOCITY (FEET/SEC.) = 4.73 FLOW DEPTH (FEET) = 2.20


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"GRASS" D 0.10 0.20 1.00 84
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 12.20 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.20
SUBAREA AREA (ACRES) = 42.30 SUBAREA RUNOFF (CFS) = 141.60
EFFECTIVE AREA (ACRES) = 107.40 AREA-AVERAGED Fm (INCH/HR) = 0.04
AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.20
TOTAL AREA (ACRES) = 107.40 PEAK FLOW RATE (CFS) = 359.80
*****
FLOW PROCESS FROM NODE 1388.00 TO NODE 1389.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 588.00 DOWNSTREAM (FEET) = 545.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 716.00 CHANNEL SLOPE = 0.0601
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 359.80
FLOW VELOCITY (FEET/SEC.) = 13.86 FLOW DEPTH (FEET) = 3.47
TRAVEL TIME (MIN.) = 0.86 Tc (MIN.) = 12.83
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1389.00 = 4311.00 FEET.
*****
FLOW PROCESS FROM NODE 1388.00 TO NODE 1389.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 12.83
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.613
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS" C 3.90 0.25 1.00 79
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 28.60 0.25 0.20 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 1.80 0.25 0.60 69
NATURAL FAIR COVER
"WOODLAND" C 2.80 0.25 1.00 73
NATURAL FAIR COVER
"GRASS" D 4.10 0.20 1.00 84
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 4.80 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.40
SUBAREA AREA (ACRES) = 46.00 SUBAREA RUNOFF (CFS) = 145.63
EFFECTIVE AREA (ACRES) = 153.40 AREA-AVERAGED Fm (INCH/HR) = 0.06
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.26
TOTAL AREA (ACRES) = 153.40 PEAK FLOW RATE (CFS) = 490.55
*****
FLOW PROCESS FROM NODE 1389.00 TO NODE 1390.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 545.00 DOWNSTREAM (FEET) = 480.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 853.00 CHANNEL SLOPE = 0.0762
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
CHANNEL FLOW THRU SUBAREA (CFS) = 490.55
FLOW VELOCITY (FEET/SEC.) = 16.39 FLOW DEPTH (FEET) = 3.83
TRAVEL TIME (MIN.) = 0.87 Tc (MIN.) = 13.69
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1390.00 = 5164.00 FEET.
*****
FLOW PROCESS FROM NODE 1389.00 TO NODE 1390.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 13.69
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.488
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN

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RESIDENTIAL
"11+ DWELLINGS/ACRE" C 8.30 0.25 0.20 69
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 0.50 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.20
SUBAREA AREA (ACRES) = 8.80 SUBAREA RUNOFF (CFS) = 27.23
EFFECTIVE AREA (ACRES) = 162.20 AREA-AVERAGED Fm (INCH/HR) = 0.06
AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.26
TOTAL AREA (ACRES) = 162.20 PEAK FLOW RATE (CFS) = 500.54
*****
FLOW PROCESS FROM NODE 1390.00 TO NODE 1391.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 480.00 DOWNSTREAM (FEET) = 396.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1352.00 CHANNEL SLOPE = 0.0621
CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
CHANNEL FLOW THRU SUBAREA (CFS) = 500.54
FLOW VELOCITY (FEET/SEC.) = 15.22 FLOW DEPTH (FEET) = 3.76
TRAVEL TIME (MIN.) = 1.48 Tc (MIN.) = 15.17
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1391.00 = 6516.00 FEET.
*****
FLOW PROCESS FROM NODE 1390.00 TO NODE 1391.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 15.17
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.280
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"11+ DWELLINGS/ACRE" B 4.60 0.30 0.20 56
NATURAL POOR COVER
"BARREN" C 0.70 0.25 1.00 91
NATURAL FAIR COVER
"GRASS" C 0.20 0.25 1.00 79
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 51.50 0.25 0.20 69
RESIDENTIAL
"3-4 DWELLINGS/ACRE" C 33.80 0.25 0.60 69
NATURAL FAIR COVER
"WOODLAND" C 0.20 0.25 1.00 73
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.36
SUBAREA AREA (ACRES) = 91.00 SUBAREA RUNOFF (CFS) = 261.29
EFFECTIVE AREA (ACRES) = 253.20 AREA-AVERAGED Fm (INCH/HR) = 0.07
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.30
TOTAL AREA (ACRES) = 253.20 PEAK FLOW RATE (CFS) = 731.52
*****
FLOW PROCESS FROM NODE 1390.00 TO NODE 1391.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 15.17
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.280
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 8.70 0.20 0.20 75
RESIDENTIAL
"3-4 DWELLINGS/ACRE" D 2.10 0.20 0.60 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.28
SUBAREA AREA (ACRES) = 10.80 SUBAREA RUNOFF (CFS) = 31.35
EFFECTIVE AREA (ACRES) = 264.00 AREA-AVERAGED Fm (INCH/HR) = 0.07
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.29
TOTAL AREA (ACRES) = 264.00 PEAK FLOW RATE (CFS) = 762.86
*****
FLOW PROCESS FROM NODE 1391.00 TO NODE 1392.00 IS CODE = 31
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>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<
>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<
=====
ELEVATION DATA: UPSTREAM(FEET) = 396.00 DOWNSTREAM(FEET) = 313.00
FLOW LENGTH(FEET) = 1067.00 MANNING'S N = 0.013
DEPTH OF FLOW IN 63.0 INCH PIPE IS 50.1 INCHES
PIPE-FLOW VELOCITY(FEET/SEC.) = 41.31
ESTIMATED PIPE DIAMETER(INCH) = 63.00 NUMBER OF PIPES = 1
PIPE-FLOW(CFS) = 762.86
PIPE TRAVEL TIME(MIN.) = 0.43 Tc(MIN.) = 15.61
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1392.00 = 7583.00 FEET.

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*****
FLOW PROCESS FROM NODE 1391.00 TO NODE 1392.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 15.61
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.232
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE           GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B      0.10   0.30   1.00   63
RESIDENTIAL
"11+ DWELLINGS/ACRE" B      8.40   0.30   0.20   56
NATURAL FAIR COVER
"OPEN BRUSH"         B      0.20   0.30   1.00   66
RESIDENTIAL
"11+ DWELLINGS/ACRE" C     26.10   0.25   0.20   69
NATURAL FAIR COVER
"OPEN BRUSH"         C      3.40   0.25   1.00   77
RESIDENTIAL
"11+ DWELLINGS/ACRE" D      0.20   0.20   0.20   75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.28
SUBAREA AREA(ACRES) = 38.40 SUBAREA RUNOFF(CFS) = 109.22
EFFECTIVE AREA(ACRES) = 302.40 AREA-AVERAGED Fm(INCH/HR) = 0.07
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.29
TOTAL AREA(ACRES) = 302.40 PEAK FLOW RATE(CFS) = 860.63

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*****
FLOW PROCESS FROM NODE 1391.00 TO NODE 1392.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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```

MAINLINE Tc(MIN) = 15.61
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.232
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE           GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"         D      0.30   0.20   1.00   83
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 0.30 SUBAREA RUNOFF(CFS) = 0.82
EFFECTIVE AREA(ACRES) = 302.70 AREA-AVERAGED Fm(INCH/HR) = 0.07
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.29
TOTAL AREA(ACRES) = 302.70 PEAK FLOW RATE(CFS) = 861.45

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*****
FLOW PROCESS FROM NODE 1392.00 TO NODE 1393.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
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ELEVATION DATA: UPSTREAM(FEET) = 313.00 DOWNSTREAM(FEET) = 280.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 670.00 CHANNEL SLOPE = 0.0493
CHANNEL BASE(FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 6.00
CHANNEL FLOW THRU SUBAREA(CFS) = 861.45
FLOW VELOCITY(FEET/SEC.) = 15.98 FLOW DEPTH(FEET) = 4.93
TRAVEL TIME(MIN.) = 0.70 Tc(MIN.) = 16.30
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1393.00 = 8253.00 FEET.

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*****
FLOW PROCESS FROM NODE 1392.00 TO NODE 1393.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

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=====
MAINLINE Tc(MIN) = 16.30
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.154
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE           GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B      0.10   0.30   1.00   63
NATURAL FAIR COVER
"GRASS"              B      0.10   0.30   1.00   69
RESIDENTIAL
"11+ DWELLINGS/ACRE" B      0.30   0.30   0.20   56
NATURAL FAIR COVER
"OPEN BRUSH"         B      2.20   0.30   1.00   66
NATURAL FAIR COVER
"WOODLAND"           B      1.10   0.30   1.00   60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C      0.10   0.25   1.00   75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
SUBAREA AREA(ACRES) = 3.90 SUBAREA RUNOFF(CFS) = 10.09
EFFECTIVE AREA(ACRES) = 306.60 AREA-AVERAGED Fm(INCH/HR) = 0.07
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.30
TOTAL AREA(ACRES) = 306.60 PEAK FLOW RATE(CFS) = 861.45
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

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*****
FLOW PROCESS FROM NODE 1392.00 TO NODE 1393.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 16.30
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.154
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE           GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH"         C      0.30   0.25   1.00   77
NATURAL FAIR COVER
"GRASS"              D      0.60   0.20   1.00   84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 0.90 SUBAREA RUNOFF(CFS) = 2.38
EFFECTIVE AREA(ACRES) = 307.50 AREA-AVERAGED Fm(INCH/HR) = 0.07
AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.30
TOTAL AREA(ACRES) = 307.50 PEAK FLOW RATE(CFS) = 861.45
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

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*****
FLOW PROCESS FROM NODE 1393.00 TO NODE 1394.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
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ELEVATION DATA: UPSTREAM(FEET) = 280.00 DOWNSTREAM(FEET) = 265.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 457.00 CHANNEL SLOPE = 0.0328
CHANNEL BASE(FEET) = 6.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 6.00
CHANNEL FLOW THRU SUBAREA(CFS) = 861.45
FLOW VELOCITY(FEET/SEC.) = 13.75 FLOW DEPTH(FEET) = 5.47
TRAVEL TIME(MIN.) = 0.55 Tc(MIN.) = 16.86
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1394.00 = 8710.00 FEET.

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*****
FLOW PROCESS FROM NODE 1393.00 TO NODE 1394.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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MAINLINE Tc(MIN) = 16.86
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.092
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE           GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              B      1.20   0.30   1.00   69
NATURAL FAIR COVER
"OPEN BRUSH"         B      3.30   0.30   1.00   66
COMMERCIAL
"OPEN BRUSH"         B      0.50   0.30   0.10   56
NATURAL FAIR COVER

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"WOODLAND" B 2.80 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 4.80 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 2.60 0.25 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.97
SUBAREA AREA (ACRES) = 15.20 SUBAREA RUNOFF (CFS) = 38.65
EFFECTIVE AREA (ACRES) = 322.70 AREA-AVERAGED Fm (INCH/HR) = 0.08
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.33
TOTAL AREA (ACRES) = 322.70 PEAK FLOW RATE (CFS) = 874.07

*****
FLOW PROCESS FROM NODE 1393.00 TO NODE 1394.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 16.86
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.092
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 9.50 0.25 1.00 77
COMMERCIAL C 0.20 0.25 0.10 69
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 55.90 0.25 0.20 69
NATURAL FAIR COVER
"WOODLAND" C 3.20 0.25 1.00 73
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" D 0.70 0.20 1.00 81
NATURAL FAIR COVER
"GRASS" D 2.20 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.37
SUBAREA AREA (ACRES) = 71.70 SUBAREA RUNOFF (CFS) = 193.62
EFFECTIVE AREA (ACRES) = 394.40 AREA-AVERAGED Fm (INCH/HR) = 0.08
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.34
TOTAL AREA (ACRES) = 394.40 PEAK FLOW RATE (CFS) = 1067.69

*****
FLOW PROCESS FROM NODE 1393.00 TO NODE 1394.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 16.86
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.092
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" D 0.30 0.20 1.00 83
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 3.60 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.26
SUBAREA AREA (ACRES) = 3.90 SUBAREA RUNOFF (CFS) = 10.67
EFFECTIVE AREA (ACRES) = 398.30 AREA-AVERAGED Fm (INCH/HR) = 0.08
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.34
TOTAL AREA (ACRES) = 398.30 PEAK FLOW RATE (CFS) = 1078.36

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1395.00 IS CODE = 51
-----
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<
-----
ELEVATION DATA: UPSTREAM (FEET) = 265.00 DOWNSTREAM (FEET) = 216.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 1573.00 CHANNEL SLOPE = 0.0312
CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00
CHANNEL FLOW THRU SUBAREA (CFS) = 1078.36
FLOW VELOCITY (FEET/SEC.) = 14.25 FLOW DEPTH (FEET) = 5.88
TRAVEL TIME (MIN.) = 1.84 Tc (MIN.) = 18.70
LONGEST FLOWPATH FROM NODE 1380.00 TO NODE 1395.00 = 10283.00 FEET.

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1395.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 18.70
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.915
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
COMMERCIAL B 1.00 0.30 0.10 56
RESIDENTIAL
"11+ DWELLINGS/ACRE" B 0.40 0.30 0.20 56
NATURAL FAIR COVER
"OPEN BRUSH" B 0.50 0.30 1.00 66
NATURAL FAIR COVER
"WOODLAND" B 1.30 0.30 1.00 60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C 0.10 0.25 1.00 75
NATURAL FAIR COVER
"GRASS" C 3.60 0.25 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.27
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.82
SUBAREA AREA (ACRES) = 6.90 SUBAREA RUNOFF (CFS) = 16.73
EFFECTIVE AREA (ACRES) = 405.20 AREA-AVERAGED Fm (INCH/HR) = 0.09
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.35
TOTAL AREA (ACRES) = 405.20 PEAK FLOW RATE (CFS) = 1078.36
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1395.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 18.70
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.915
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" C 2.60 0.25 1.00 77
COMMERCIAL C 1.10 0.25 0.10 69
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 0.50 0.25 0.20 69
NATURAL FAIR COVER
"WOODLAND" C 4.30 0.25 1.00 73
PUBLIC PARK D 5.80 0.20 0.85 75
NATURAL FAIR COVER
"GRASS" D 1.50 0.20 1.00 84
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.23
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.86
SUBAREA AREA (ACRES) = 15.80 SUBAREA RUNOFF (CFS) = 38.69
EFFECTIVE AREA (ACRES) = 421.00 AREA-AVERAGED Fm (INCH/HR) = 0.09
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.37
TOTAL AREA (ACRES) = 421.00 PEAK FLOW RATE (CFS) = 1078.36
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

*****
FLOW PROCESS FROM NODE 1394.00 TO NODE 1395.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
-----
MAINLINE Tc (MIN) = 18.70
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.915
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" D 12.00 0.20 1.00 83
COMMERCIAL D 0.40 0.20 0.10 75
NATURAL FAIR COVER
"WOODLAND" D 1.10 0.20 1.00 79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.97
SUBAREA AREA (ACRES) = 13.50 SUBAREA RUNOFF (CFS) = 33.05
EFFECTIVE AREA (ACRES) = 434.50 AREA-AVERAGED Fm (INCH/HR) = 0.09
AREA-AVERAGED Fp (INCH/HR) = 0.24 AREA-AVERAGED Ap = 0.39
TOTAL AREA (ACRES) = 434.50 PEAK FLOW RATE (CFS) = 1103.25

*****
FLOW PROCESS FROM NODE 1395.00 TO NODE 1395.00 IS CODE = 1
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>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<
>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<

TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
TIME OF CONCENTRATION (MIN.) = 18.70
RAINFALL INTENSITY (INCH/HR) = 2.91
AREA-AVERAGED Fm (INCH/HR) = 0.09
AREA-AVERAGED Fp (INCH/HR) = 0.24
AREA-AVERAGED Ap = 0.39
EFFECTIVE STREAM AREA (ACRES) = 434.50
TOTAL STREAM AREA (ACRES) = 434.50
PEAK FLOW RATE (CFS) AT CONFLUENCE = 1103.25

** CONFLUENCE DATA **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	4972.97	30.37	2.206	0.25 (0.19)	0.75	2566.7	1360.00
1	5313.03	37.69	1.949	0.25 (0.19)	0.76	3182.3	1300.00
1	5267.41	39.24	1.903	0.25 (0.19)	0.75	3236.1	1340.00
1	4768.56	50.08	1.649	0.25 (0.19)	0.74	3462.0	1320.00
2	1103.25	18.70	2.915	0.24 (0.09)	0.39	434.5	1380.00

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

** PEAK FLOW RATE TABLE **

STREAM NUMBER	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp(Fm) (INCH/HR)	Ap	Ae (ACRES)	HEADWATER NODE
1	5241.60	18.70	2.915	0.25 (0.17)	0.67	2014.7	1380.00
2	5799.10	30.37	2.206	0.25 (0.18)	0.70	3001.2	1360.00
3	6038.81	37.69	1.949	0.25 (0.18)	0.71	3616.8	1300.00
4	5975.06	39.24	1.903	0.25 (0.18)	0.71	3670.6	1340.00
5	5376.78	50.08	1.649	0.25 (0.18)	0.70	3896.5	1320.00

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:

PEAK FLOW RATE (CFS) = 6038.81 Tc (MIN.) = 37.69
EFFECTIVE AREA (ACRES) = 3616.81 AREA-AVERAGED Fm (INCH/HR) = 0.18
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.71
TOTAL AREA (ACRES) = 3896.50
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1395.00 = 25397.00 FEET.

FLOW PROCESS FROM NODE 1395.00 TO NODE 1396.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 216.00 DOWNSTREAM (FEET) = 214.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 60.00 CHANNEL SLOPE = 0.0333
CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
CHANNEL FLOW THRU SUBAREA (CFS) = 6038.81
FLOW VELOCITY (FEET/SEC.) = 19.31 FLOW DEPTH (FEET) = 3.41
TRAVEL TIME (MIN.) = 0.05 Tc (MIN.) = 37.74
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1396.00 = 25457.00 FEET.

FLOW PROCESS FROM NODE 1395.00 TO NODE 1396.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 37.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.948
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
PUBLIC PARK A 1.60 0.40 0.85 32
NATURAL POOR COVER
"BARREN" A 0.20 0.40 1.00 78
NATURAL FAIR COVER
"GRASS" A 2.10 0.40 1.00 50
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" A 9.50 0.40 1.00 49
RESIDENTIAL
"11+ DWELLINGS/ACRE" A 3.30 0.40 0.20 32
NATURAL FAIR COVER
"CHAPARRAL, BROADLEAF" A 0.20 0.40 1.00 40
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.40

SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.83
SUBAREA AREA (ACRES) = 16.90 SUBAREA RUNOFF (CFS) = 24.58
EFFECTIVE AREA (ACRES) = 3633.71 AREA-AVERAGED Fm (INCH/HR) = 0.18
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.71
TOTAL AREA (ACRES) = 3913.40 PEAK FLOW RATE (CFS) = 6038.81
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 1395.00 TO NODE 1396.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 37.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.948
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND" A 0.70 0.40 1.00 36
RESIDENTIAL
"11+ DWELLINGS/ACRE" B 22.80 0.30 0.20 56
NATURAL FAIR COVER
"GRASS" C 0.40 0.25 1.00 79
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND" C 1.40 0.25 1.00 79
RESIDENTIAL
"11+ DWELLINGS/ACRE" C 13.20 0.25 0.20 69
AGRICULTURAL FAIR COVER
"ORCHARDS" D 0.40 0.20 1.00 82
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.28
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.26
SUBAREA AREA (ACRES) = 38.90 SUBAREA RUNOFF (CFS) = 65.64
EFFECTIVE AREA (ACRES) = 3672.61 AREA-AVERAGED Fm (INCH/HR) = 0.18
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.71
TOTAL AREA (ACRES) = 3952.30 PEAK FLOW RATE (CFS) = 6038.81
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 1395.00 TO NODE 1396.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

MAINLINE Tc (MIN) = 37.74
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.948
SUBAREA LOSS RATE DATA (AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"OPEN BRUSH" D 0.20 0.20 1.00 83
PUBLIC PARK D 0.40 0.20 0.85 75
RESIDENTIAL
"11+ DWELLINGS/ACRE" D 45.50 0.20 0.20 75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.21
SUBAREA AREA (ACRES) = 46.10 SUBAREA RUNOFF (CFS) = 79.08
EFFECTIVE AREA (ACRES) = 3718.71 AREA-AVERAGED Fm (INCH/HR) = 0.18
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.70
TOTAL AREA (ACRES) = 3998.40 PEAK FLOW RATE (CFS) = 6038.81
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

FLOW PROCESS FROM NODE 1396.00 TO NODE 1066.00 IS CODE = 51

>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<

>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<

ELEVATION DATA: UPSTREAM (FEET) = 214.00 DOWNSTREAM (FEET) = 213.00
CHANNEL LENGTH THRU SUBAREA (FEET) = 3053.00 CHANNEL SLOPE = 0.0003
CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
CHANNEL FLOW THRU SUBAREA (CFS) = 6038.81
FLOW VELOCITY (FEET/SEC.) = 4.18 FLOW DEPTH (FEET) = 13.00
TRAVEL TIME (MIN.) = 12.16 Tc (MIN.) = 49.91
LONGEST FLOWPATH FROM NODE 1320.00 TO NODE 1066.00 = 28510.00 FEET.

FLOW PROCESS FROM NODE 1396.00 TO NODE 1066.00 IS CODE = 81

>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<

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=====
MAINLINE Tc(MIN) = 49.91
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.652
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP (ACRES) (INCH/HR) (DECIMAL) CN
PUBLIC PARK          A         8.80   0.40  0.85  32
NATURAL FAIR COVER
"GRASS"              A         22.30  0.40  1.00  50
RESIDENTIAL
"11+ DWELLINGS/ACRE" A         1.20   0.40  0.20  32
NATURAL FAIR COVER
"WOODLAND"          A         4.90   0.40  1.00  36
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" B         0.20   0.30  1.00  63
NATURAL POOR COVER
"BARREN"            B         0.20   0.30  1.00  86
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
SUBAREA AREA(ACRES) = 37.60 SUBAREA RUNOFF(CFS) = 43.23
EFFECTIVE AREA(ACRES) = 3756.31 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.70
TOTAL AREA(ACRES) = 4036.00 PEAK FLOW RATE(CFS) = 6038.81
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

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FLOW PROCESS FROM NODE 1396.00 TO NODE 1066.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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=====
MAINLINE Tc(MIN) = 49.91
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.652
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"GRASS"              B         3.50   0.30  1.00  69
NATURAL FAIR COVER
"OPEN BRUSH"         B         3.70   0.30  1.00  66
COMMERCIAL
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND"   B         1.60   0.30  1.00  69
PUBLIC PARK          B         0.40   0.30  0.85  56
RESIDENTIAL
"11+ DWELLINGS/ACRE" B         17.40  0.30  0.20  56
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.46
SUBAREA AREA(ACRES) = 27.30 SUBAREA RUNOFF(CFS) = 37.17
EFFECTIVE AREA(ACRES) = 3783.61 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.70
TOTAL AREA(ACRES) = 4063.30 PEAK FLOW RATE(CFS) = 6038.81
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

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FLOW PROCESS FROM NODE 1396.00 TO NODE 1066.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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=====
MAINLINE Tc(MIN) = 49.91
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.652
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
"WOODLAND"          B         4.70   0.30  1.00  60
NATURAL FAIR COVER
"CHAPARRAL,BROADLEAF" C         6.80   0.25  1.00  75
NATURAL POOR COVER
"BARREN"            C         4.80   0.25  1.00  91
NATURAL FAIR COVER
"GRASS"             C         20.60  0.25  1.00  79
AGRICULTURAL FAIR COVER
"PASTURE, DRYLAND"   C         1.30   0.25  1.00  79
NATURAL FAIR COVER
"OPEN BRUSH"        C         0.50   0.25  1.00  77
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
SUBAREA AREA(ACRES) = 38.70 SUBAREA RUNOFF(CFS) = 48.63
EFFECTIVE AREA(ACRES) = 3822.31 AREA-AVERAGED Fm(INCH/HR) = 0.18

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AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.71
TOTAL AREA(ACRES) = 4102.00 PEAK FLOW RATE(CFS) = 6038.81
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

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FLOW PROCESS FROM NODE 1396.00 TO NODE 1066.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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=====
MAINLINE Tc(MIN) = 49.91
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.652
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP (ACRES) (INCH/HR) (DECIMAL) CN
COMMERCIAL
RESIDENTIAL
"11+ DWELLINGS/ACRE" C         21.10  0.25  0.20  69
NATURAL FAIR COVER
"WOODLAND"          C         10.70  0.25  1.00  73
NATURAL FAIR COVER
"GRASS"             D         6.70   0.20  1.00  84
NATURAL FAIR COVER
"OPEN BRUSH"        D         14.50  0.20  1.00  83
PUBLIC PARK          D         16.00  0.20  0.85  75
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.70
SUBAREA AREA(ACRES) = 71.20 SUBAREA RUNOFF(CFS) = 96.20
EFFECTIVE AREA(ACRES) = 3893.51 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.71
TOTAL AREA(ACRES) = 4173.20 PEAK FLOW RATE(CFS) = 6038.81
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

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FLOW PROCESS FROM NODE 1396.00 TO NODE 1066.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<
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=====
MAINLINE Tc(MIN) = 49.91
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.652
SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/   SCS SOIL   AREA   Fp   Ap   SCS
LAND USE            GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL GOOD COVER
"MEADOWS"           D         1.60   0.20  1.00  78
RESIDENTIAL
"11+ DWELLINGS/ACRE" D         0.70   0.20  0.20  75
NATURAL FAIR COVER
"WOODLAND"          D         6.50   0.20  1.00  79
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.94
SUBAREA AREA(ACRES) = 8.80 SUBAREA RUNOFF(CFS) = 11.60
EFFECTIVE AREA(ACRES) = 3902.31 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.71
TOTAL AREA(ACRES) = 4182.00 PEAK FLOW RATE(CFS) = 6038.81
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

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END OF STUDY SUMMARY:
TOTAL AREA(ACRES) = 4182.00 TC(MIN.) = 49.91
EFFECTIVE AREA(ACRES) = 3902.31 AREA-AVERAGED Fm(INCH/HR) = 0.18
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.71
PEAK FLOW RATE(CFS) = 6038.81

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** PEAK FLOW RATE TABLE **
STREAM Q Tc Intensity Fp(Fm) Ap Ae HEADWATER
NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
1 5241.60 31.46 2.165 0.26( 0.17) 0.67 2300.2 1380.00
2 5799.10 42.74 1.817 0.25( 0.18) 0.69 3286.7 1360.00
3 6038.81 49.91 1.652 0.25( 0.18) 0.71 3902.3 1300.00
4 5975.06 51.49 1.626 0.25( 0.18) 0.70 3956.1 1340.00
5 5376.78 62.74 1.454 0.25( 0.18) 0.69 4182.0 1320.00

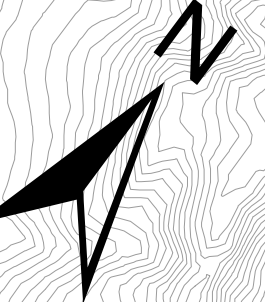
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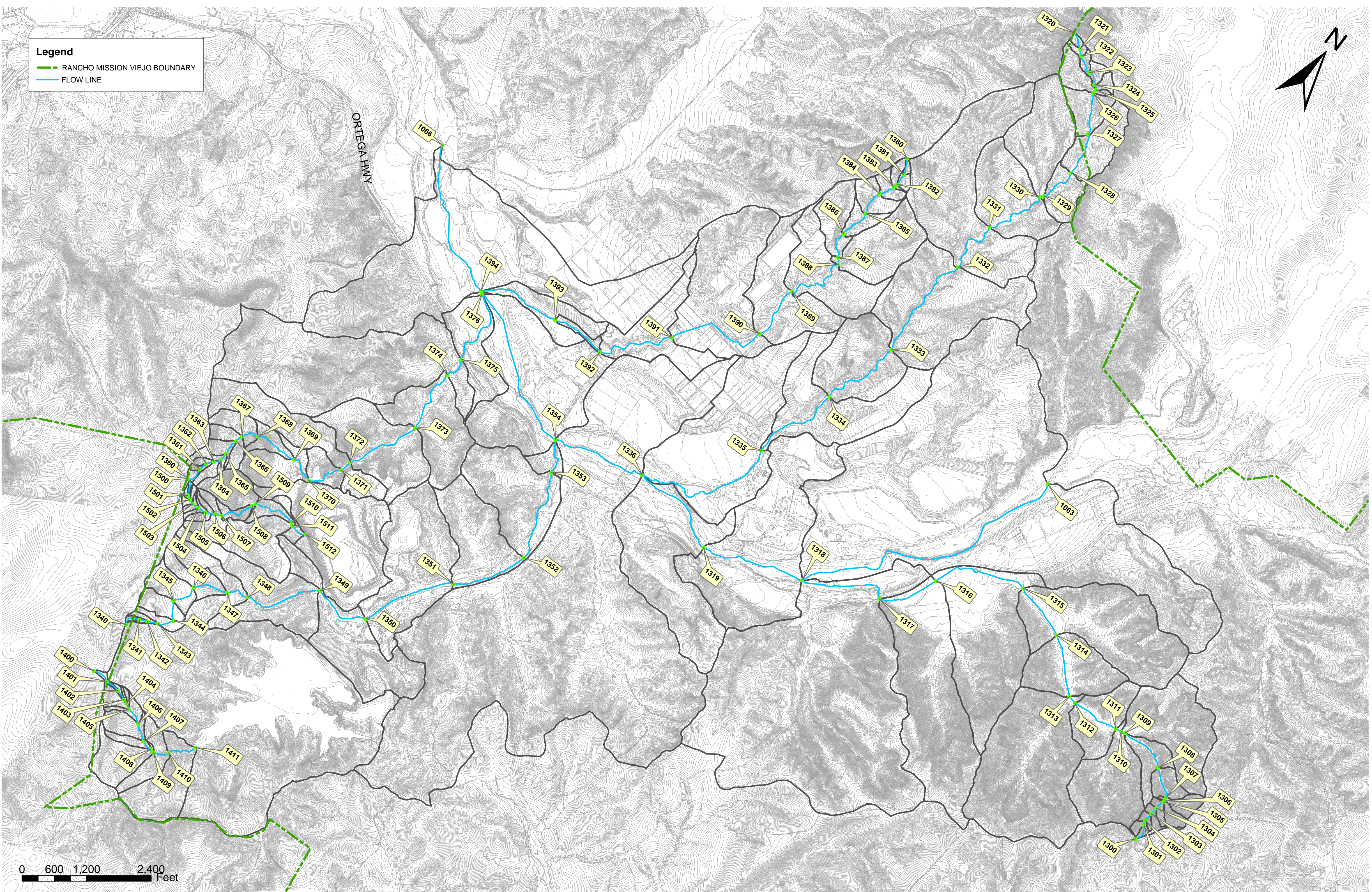
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END OF RATIONAL METHOD ANALYSIS

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Legend
 --- RANCHO MISSION VIEJO BOUNDARY
 --- FLOW LINE



ORTEGA HWY



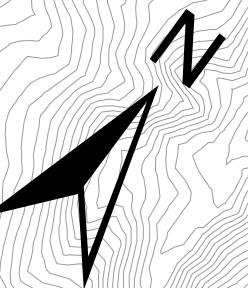
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**HYDROLOGIC MAP FOR EXISTING CONDITION
 TRAMPAS CANYON**

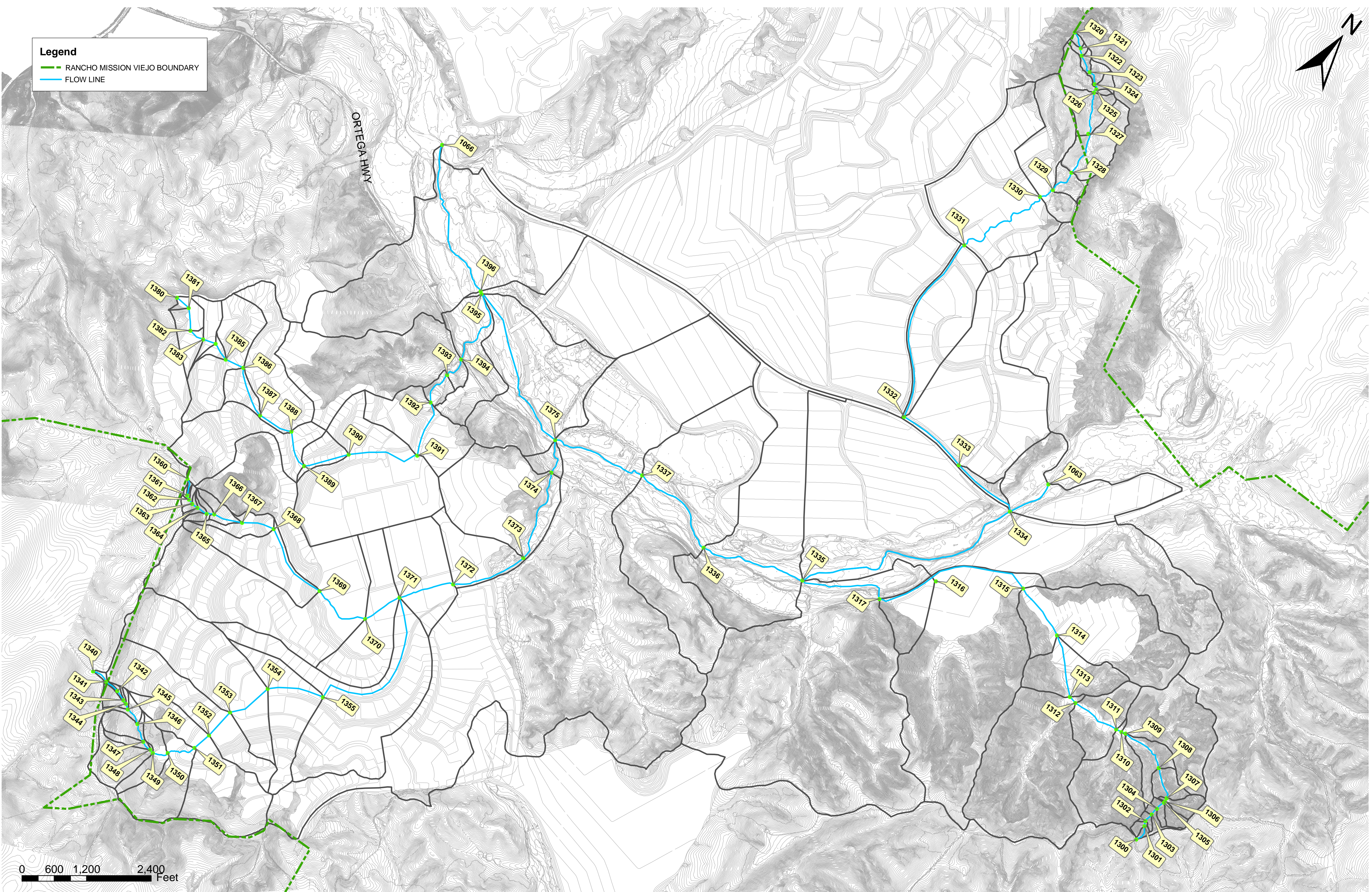
HUITT-ZOLLARS
 (714) 734-5100
 430 EXCHANGE, SUITE 200
 IRVINE, CA 92602

Legend

- RANCHO MISSION VIEJO BOUNDARY
- FLOW LINE



ORTEGA HWY



**HYDROLOGIC MAP FOR PROPOSED CONDITION
TRAMPAS CANYON CREEK CHANNEL**

HUITT-ZOLLARS

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