# **HYDROLOGIC REPORT**

TO

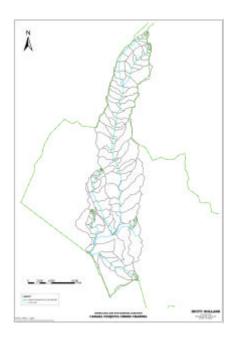
# THE BASELINE HYDROLOGIC CONDITIONS CAÑADA CHIQUITA

## PREPARED FOR



RANCHO MISSION VIEJO

**APRIL 2, 2004** 



**VOLUME V** 



HYDROLOGIC REPORT TO THE BASELINE HYDROLOGIC CONDITIONS CANADA CHIQUITA

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SUPPLEMENTAL HYDROLOGIC REPORT TO THE BASELINE HYDROLOGIC CONDITIONS CANADA CHIQUITA

#### INTRODUCTION

A Hydrology Report for Canada Chiquita of the San Juan Creek system has been completed to the confluence with San Juan Creek. The watershed encompasses approximately 6.35 square miles. The watershed elevations range from approximately 180 feet above sea level at the downstream confluence with San Juan Creek to approximately 1,200 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, a single area hydrograph was prepared for each drainage condition at the confluence with San Juan Creek.

To model the 100-Year High Confidence analysis, the Advanced Engineering Software RATSCx program was utilized. The RATSCx program was used to develop both the rational method analysis and the hydrograph analysis. The hydrograph was based on data calculated from the rational method analysis. The time of concentration (Tc) from the rational method was used to calculate the basin lag at the hydrograph location.

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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-, 5-, 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 2,000' elevation, was utilized.

Tot areas below the 2,000 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
General Developed Areas	5-7 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)
General Sage Scrub	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)
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, travel times for individual reaches meet 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 sub-areas rather than the sub-area size defining a concentration node.

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#### **CONCLUSIONS**

#### **Hydrologic Results**

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

#### **Impact of Proposed Development**

The proposed development appears to have little impact on the drainage characteristics of Canada Chiquita at the San Juan Creek confluence. Percentage wise, the increase in peak flow rate due to development was only estimated to be 0.4% and the total storm runoff volume decreased slightly.

SUPPLEMENTAL HYDROLOGIC REPORT TO THE BASELINE HYDROLOGIC CONDITIONS CANADA CHIQUITA

#### **HYDROLOGIC SUMMARY**

# **Existing Condition**

		Tota	I Area	Lag	Peak Flow Rate	Runoff Volume
Node	Location	(acres)	(sq. mi.)	(hr)	(cfs)	(ac-ft)
826	San Juan Creek	4,066	6.35	0.85	3,357	1,219

#### **Proposed Condition**

	_	Tota	I Area	Lag	Peak Flow Rate	Runoff Volume
Node	Location	(acres)	(sq. mi.)	(hr)	(cfs)	(ac-ft)
826	San Juan Creek	4,063	6.35	0.84	3,369	1,189

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

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



```
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.
                    430 Exchange, Suite 200
                     Irvine, CA. 92602-1309
                       714 - 734 - 5100
______
 FILE NAME: CE31100H.DAT
 TIME/DATE OF STUDY: 14:21 03/31/2004
______
 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 0.0312 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
                                   0.140
       MOUNTAIN
                                  0.620
       VALLEY (UNDEVELOPED) / DESERT
                                 0 220
       DESERT (UNDEVELOPED)
                                   0.000
  STERRA 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 3100.00 TO NODE 3101.00 IS CODE = 21
```

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<

```
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
._____
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 329.00
 ELEVATION DATA: UPSTREAM(FEET) = 1195.00 DOWNSTREAM(FEET) = 1090.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.013
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.414
 SUBAREA To AND LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fρ
                                        Ap SCS Tc
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 NATURAL FAIR COVER
                   C 1.20 0.25 1.00 77 9.01
 "OPEN BRUSH"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF (CFS) = 4.50
 TOTAL AREA(ACRES) = 1.20 PEAK FLOW RATE(CFS) = 4.50
*******************
 FLOW PROCESS FROM NODE 3101.00 TO NODE 3102.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 1090.00 DOWNSTREAM(FEET) = 1060.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 246.00 CHANNEL SLOPE = 0.1220
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4.50
 FLOW VELOCITY (FEET/SEC.) = 5.99 FLOW DEPTH (FEET) = 0.50
 TRAVEL TIME (MIN.) = 0.68 Tc (MIN.) = 9.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3102.00 = 575.00 FEET.
******************
 FLOW PROCESS FROM NODE 3101.00 TO NODE 3102.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 9.70
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.249
 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"
                         0.20 0.30 1.00 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C 0.70 0.25 1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C
                         0.10 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) = 1.00 SUBAREA RUNOFF(CFS) = 3.59
 EFFECTIVE AREA(ACRES) = 2.20 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 2.20 PEAK FLOW RATE(CFS) =
********************
 FLOW PROCESS FROM NODE 3102.00 TO NODE 3103.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1060.00 DOWNSTREAM(FEET) = 1050.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 131.00 CHANNEL SLOPE = 0.0763
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 7.91
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FLOW VELOCITY (FEET/SEC.) = 5.83 FLOW DEPTH (FEET) = 0.77
 TRAVEL TIME (MIN.) = 0.37 Tc (MIN.) = 10.07
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3103.00 = 706.00 FEET.
*****
 FLOW PROCESS FROM NODE 3102.00 TO NODE 3103.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
.-----
 MAINLINE Tc (MIN) = 10.07
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.145
 SUBAREA LOSS RATE DATA(AMC II):
                               Fp
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                               SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          0.80
                                0.30
                   В
                                         1.00 66
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C
                          2.60 0.25
                                        1.00 77
 AGRICULTURAL FAIR COVER
                C
                         0.10 0.25 1.00 79
 "PASTURE, DRYLAND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 3.50 SUBAREA RUNOFF(CFS) = 12.23
 EFFECTIVE AREA(ACRES) = 5.70 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 5.70 PEAK FLOW RATE(CFS) = 19.94
*****
 FLOW PROCESS FROM NODE 3103.00 TO NODE 3104.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1050.00 DOWNSTREAM(FEET) = 1040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 141.00 CHANNEL SLOPE = 0.0709
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 19.94
 FLOW VELOCITY (FEET/SEC.) = 7.05 FLOW DEPTH (FEET) = 0.96
 TRAVEL TIME (MIN.) = 0.33 Tc (MIN.) = 10.41
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3104.00 = 847.00 FEET.
********************
 FLOW PROCESS FROM NODE 3103.00 TO NODE 3104.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 10.41
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.079
 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"
                          0.80
                                0.30
                                        1.00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                  В
                          0.60
                                0.30
                                        1.00 69
 NATURAL FAIR COVER
                         2.70
 "OPEN BRUSH"
                    C
                                 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) = 4.10 SUBAREA RUNOFF(CFS) = 14.07
 EFFECTIVE AREA(ACRES) = 9.80 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 9.80 PEAK FLOW RATE(CFS) = 33.66
********************
 FLOW PROCESS FROM NODE 3104.00 TO NODE 3105.00 IS CODE = 51
```

```
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>
ELEVATION DATA: UPSTREAM(FEET) = 1040.00 DOWNSTREAM(FEET) = 1030.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 156.00 CHANNEL SLOPE = 0.0641
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                           33.66
 FLOW VELOCITY (FEET/SEC.) = 7.83 FLOW DEPTH (FEET) = 1.30
 TRAVEL TIME (MIN.) = 0.33 Tc (MIN.) = 10.74
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3105.00 = 1003.00 FEET.
*****
FLOW PROCESS FROM NODE 3104.00 TO NODE 3105.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 10.74
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.012
 SUBAREA LOSS RATE DATA(AMC II):
                                Fp
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                         Ap
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                                   0.30
                           1 50
                                          1 00
                                                 66
                     B
 AGRICULTURAL FAIR COVER
                           0.90 0.30 1.00 69
 "PASTURE, DRYLAND"
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          3.50
                                 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) = 5.90 SUBAREA RUNOFF (CFS) = 19.87
 EFFECTIVE AREA(ACRES) = 15.70 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 15.70 PEAK FLOW RATE(CFS) = 52.95
*******************
 FLOW PROCESS FROM NODE 3105.00 TO NODE 3106.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1030.00 DOWNSTREAM(FEET) = 1010.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 462.00 CHANNEL SLOPE = 0.0433
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                           52.95
 FLOW VELOCITY (FEET/SEC.) = 7.61 FLOW DEPTH (FEET) = 1.82
 TRAVEL TIME (MIN.) = 1.01 Tc (MIN.) = 11.75
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3106.00 = 1465.00 FEET.
******************
FLOW PROCESS FROM NODE 3105.00 TO NODE 3106.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 11.75
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.810
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                Fp
                                         Ap
                                               SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.90
                                   0.30
                                          1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           3.10
                                   0.30
                                          1.00
                                                69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                           6.20
                                          1.00 77
                                   0.25
```

```
AGRICULTURAL FAIR COVER
                            0.10 0.25 1.00 79
  "PASTURE,DRYLAND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 10.30 SUBAREA RUNOFF(CFS) = 32.82
 EFFECTIVE AREA(ACRES) = 26.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 26.00 PEAK FLOW RATE(CFS) =
*****************
 FLOW PROCESS FROM NODE 3106.00 TO NODE 3107.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 1010.00 DOWNSTREAM(FEET) = 980.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 589.00 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) = 82.91
 FLOW VELOCITY (FEET/SEC.) = 8.98 FLOW DEPTH (FEET) = 1.89
 TRAVEL TIME (MIN.) = 1.09 Tc (MIN.) = 12.84
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3107.00 = 2054.00 FEET.
*********************
 FLOW PROCESS FROM NODE 3106.00 TO NODE 3107.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 12.84
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.611
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                           Ap
                                   Fρ
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                           1.30
                                  0.30
 "OPEN BRUSH"
                                           1 00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     в 2.70 0.30
                                          1.00 69
 NATURAL FAIR COVER
                           4.30
                                  0.25
 "OPEN BRUSH"
                                          1.00 77
 AGRICULTURAL FAIR COVER
                                          1.00 79
 "PASTURE, DRYLAND"
                     C
                           1.50
                                  0.25
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 9.80
                         SUBAREA RUNOFF(CFS) = 29.46
 EFFECTIVE AREA(ACRES) = 35.80 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 35.80
                            PEAK FLOW RATE (CFS) =
*******************
 FLOW PROCESS FROM NODE 3107.00 TO NODE 3108.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 980.00 DOWNSTREAM(FEET) = 970.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 322.00 CHANNEL SLOPE = 0.0311
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 107.70
 FLOW VELOCITY (FEET/SEC.) = 8.01 FLOW DEPTH (FEET) = 2.46
 TRAVEL TIME (MIN.) = 0.67 Tc (MIN.) = 13.51
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3108.00 = 2376.00 FEET.
 FLOW PROCESS FROM NODE 3107.00 TO NODE 3108.00 IS CODE = 81
______
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>>>>ADDITION OF SUBARE					
MAINLINE TC (MIN) = 13.					
* 100 YEAR RAINFALL INT	ENSITY(IN	CH/HR) =	3.514		
SUBAREA LOSS RATE DATA(A	AMC II):				
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER "OPEN BRUSH"	В	1.20	0.30	1.00	66
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	В	3.90	0.30	1.00	69
"PASTURE,DRYLAND" NATURAL FAIR COVER "OPEN BRUSH"	С	8.60	0.25	1.00	77
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"		2.40	0.25	1.00	79
"PASTURE, DRYLAND" NATURAL FAIR COVER "WOODLAND"			0.25		
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS				.26	
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	18.30	SUBAREA	RUNOFF (CFS		
AREA-AVERAGED Fp(INCH/H) TOTAL AREA(ACRES) =	R) = 0.2	7 AREA-AV	ERAGED Ap =	= 1.00	0.27
TOTAL AREA(ACRES) =	54.10	PEAK F	LOW RATE (CI	FS) =	158.12
*****	*****	*****	*****	*****	****
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDA:	L CHANNEL	FLOW<			
ELEVATION DATA UDOTDEA					
ELEVATION DATA: UPSTREAM CHANNEL LENGTH THRU SUB					
CHANNEL BASE (FEET) =					
MANNING'S FACTOR = 0.04				.00	
CHANNEL FLOW THRU SUBARI FLOW VELOCITY (FEET/SEC.	SA(CFS) = 8.7	158.12 FLOW D	EPTH (FEET)	= 2.70	
TRAVEL TIME (MIN.) = 1	.25 Tc(1	MIN.) = 1	4.76		
LONGEST FLOWPATH FROM NO	DDE 310	0.00 TO NO	DE 3109.0	00 = 3030	.00 FEET.
*****	*****	*****	******	*****	****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					=======
MAINLINE Tc (MIN) = 14.					
* 100 YEAR RAINFALL INT			3.334		
SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/	SCS SOIL	AREA	Fn	An	SCS
		(ACRES)	(INCH/HR)	(DECIMAL)	CN
LAND USE NATURAL FAIR COVER "OPEN BRUSH"		1 20	0.20	1 00	
"OPEN BRUSH" AGRICULTURAL FAIR COVER	В	1.30	0.30	1.00	66
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" NATURAL FAIR COVER	В	6.30	0.30	1.00	69
"WOODLAND"	В	0.20	0.30	1.00	60
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	С	0.90	0.25	1.00	75
NATURAL FAIR COVER "OPEN BRUSH"	С	10.40	0.25	1.00	77
AGRICULTURAL FAIR COVER					
"PASTURE, DRYLAND" SUBAREA AVERAGE PERVIOUS			0.25 H/HR) = 0		79
SUBAREA AVERAGE PERVIOUS				/	
SUBAREA AREA(ACRES) =	25.10	SUBAREA	RUNOFF (CFS		
EFFECTIVE AREA(ACRES) = AREA-AVERAGED Fp(INCH/H)	79.2	O AREA-A	VERAGED Fm	(INCH/HR)	= 0.27
TOTAL AREA(ACRES) =					218.68

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FLOW PROCESS FROM NODE 3108.00 TO NODE 3109.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
______
 MAINLINE Tc (MIN) = 14.76
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.334
 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
                c 0.30 0.25 1.00 73
 "WOODLAND"
 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) = 0.83
 EFFECTIVE AREA(ACRES) = 79.50 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 79.50 PEAK FLOW RATE(CFS) = 219.52
******************
FLOW PROCESS FROM NODE 3109.00 TO NODE 3110.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 950.00 DOWNSTREAM(FEET) = 890.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1548.00 CHANNEL SLOPE = 0.0388
 CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 219.52
 FLOW VELOCITY (FEET/SEC.) = 10.37 FLOW DEPTH (FEET) = 3.02
 TRAVEL TIME (MIN.) = 2.49 Tc (MIN.) = 17.25
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3110.00 = 4578.00 FEET.
FLOW PROCESS FROM NODE 3109.00 TO NODE 3110.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 17.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.048
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                              Fρ
                                     Ap SCS
    LAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                        5.50
                                0.30
                                       1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                   В
                      10.40
                              0.30
                                       1.00 69
 NATURAL FAIR COVER
 "WOODT AND"
                        2.20
                              0.30
                                      1.00 60
                   В
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                        3.80 0.25
                                     1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 22.10 0.25 1.00 77
 AGRICULTURAL FAIR COVER
                              0.25 1.00 79
 "PASTURE, DRYLAND" C
                        1.80
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 45.80 SUBAREA RUNOFF(CFS) = 114.52
 EFFECTIVE AREA(ACRES) = 125.30 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 125.30 PEAK FLOW RATE(CFS) = 313.56
 FLOW PROCESS FROM NODE 3110.00 TO NODE 3111.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 890.00 DOWNSTREAM(FEET) = 850.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1572.00 CHANNEL SLOPE = 0.0254
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 313.56
 FLOW VELOCITY(FEET/SEC.) = 9.67 FLOW DEPTH(FEET) = 3.72 TRAVEL TIME(MIN.) = 2.71 Tc(MIN.) = 19.96
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3111.00 = 6150.00 FEET.
FLOW PROCESS FROM NODE 3110.00 TO NODE 3111.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 19.96
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.804
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.40
                                  0.30
                                         1.00
                  B
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          0.80
                                  0.30
                                         1.00
                                               66
                    В
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          9.40
                                  0.30
                                         1.00
 NATURAL FAIR COVER
 "WOODLAND"
                         1.60
                                 0.30
                                         1.00
                                               60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C
                         3.50 0.25 1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C 23.40 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) = 39.10 SUBAREA RUNOFF(CFS) = 89.31
 EFFECTIVE AREA(ACRES) = 164.40 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 164.40 PEAK FLOW RATE(CFS) = 375.31
.....
 FLOW PROCESS FROM NODE 3110.00 TO NODE 3111.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 19.96
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.804
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                         4.70 0.25 1.00 79
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 0.80 0.20 1.00
 NATURAL FAIR COVER
 "WOODLAND"
                   D 1.10 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) = 6.60 SUBAREA RUNOFF(CFS) = 15.25
 EFFECTIVE AREA(ACRES) = 171.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp (INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 171.00 PEAK FLOW RATE(CFS) = 390.57
FLOW PROCESS FROM NODE 3111.00 TO NODE 3112.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 850.00 DOWNSTREAM(FEET) = 810.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1623.00 CHANNEL SLOPE = 0.0246
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 390.57
 FLOW VELOCITY (FEET/SEC.) = 10.13 FLOW DEPTH (FEET) = 4.19
 TRAVEL TIME (MIN.) = 2.67 Tc (MIN.) = 22.63
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3112.00 = 7773.00 FEET.
FLOW PROCESS FROM NODE 3111.00 TO NODE 3112.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 22.63
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.602
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap
                                              SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" B
                         1.50
                                 0.30
                                         0.50 56
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    В
                         3.10
                                0.30
                                        1.00 66
 AGRICULTURAL FAIR COVER
                       10.70
 "PASTURE, DRYLAND"
                                0.30
                                        1.00 69
 NATURAL FAIR COVER
                    B 0.40
 "WOODLAND"
                                 0.30
                                        1.00 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C 0.50 0.25 1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 16.70 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 32.90 SUBAREA RUNOFF(CFS) = 69.15
 EFFECTIVE AREA(ACRES) = 203.90 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 203.90 PEAK FLOW RATE (CFS) = 428.73
-----
 FLOW PROCESS FROM NODE 3111.00 TO NODE 3112.00 IS CODE = 81
._____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 22.63
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.602
 SUBAREA LOSS RATE DATA(AMC II):
                                       Ap SCS
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          2.30 0.25
                                        1.00 79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                   D 5.10 0.20
                                      0.50 75
 AGRICULTURAL FAIR COVER
                   D 0.90 0.20 1.00 84
 "PASTURE, DRYLAND"
 NATURAL FAIR COVER
 "WOODLAND"
                   D
                        0.40
                               0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.71
 SUBAREA AREA(ACRES) = 8.70 SUBAREA RUNOFF(CFS) = 19.17
 EFFECTIVE AREA(ACRES) = 212.60 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 212.60 PEAK FLOW RATE (CFS) = 447.89
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FLOW PROCESS FROM NODE 3112.00 TO NODE 3113.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
ELEVATION DATA: UPSTREAM(FEET) = 810.00 DOWNSTREAM(FEET) = 770.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1754.00 CHANNEL SLOPE = 0.0228
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 447.89
 FLOW VELOCITY (FEET/SEC.) = 10.18 FLOW DEPTH (FEET) = 4.59
 TRAVEL TIME (MIN.) = 2.87 Tc (MIN.) = 25.50
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3113.00 = 9527.00 FEET.
*******************
FLOW PROCESS FROM NODE 3112.00 TO NODE 3113.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 25.50
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.434
 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"
                  В
                          11.20
                                  0.30
                                         0.50
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          2.90
                                  0.30
                                         1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          10.30
                                  0.30
                                         1.00
                                               69
 NATURAL FAIR COVER
 "WOODLAND"
                         0.40
                                  0.30
                                         1.00
                                               60
 NATURAL FAIR COVER
 "GRASS"
                         1.10 0.25 1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 19.10 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.88
 SUBAREA AREA (ACRES) = 45.00 SUBAREA RUNOFF (CFS) = 88.85
 EFFECTIVE AREA(ACRES) = 257.60 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 257.60 PEAK FLOW RATE(CFS) =
******************
 FLOW PROCESS FROM NODE 3112.00 TO NODE 3113.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 25.50
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.434
 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"
                         4.00 0.25 1.00 79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 16.30 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
 SUBAREA AREA (ACRES) = 20.30 SUBAREA RUNOFF (CFS) = 42.10
 EFFECTIVE AREA(ACRES) = 277.90 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.94
 TOTAL AREA(ACRES) = 277.90 PEAK FLOW RATE(CFS) = 546.64
FLOW PROCESS FROM NODE 3113.00 TO NODE 3114.00 IS CODE = 51
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 770.00 DOWNSTREAM(FEET) = 740.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1443.00 CHANNEL SLOPE = 0.0208
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 546.64
 FLOW VELOCITY (FEET/SEC.) = 10.33 FLOW DEPTH (FEET) = 4.87
 TRAVEL TIME (MIN.) = 2.33 Tc (MIN.) = 27.83
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3114.00 = 10970.00 FEET.
FLOW PROCESS FROM NODE 3113.00 TO NODE 3114.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 27.83
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.316
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap
                                             SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    TAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" B
                         8.10
                                 0.30
                                        0.50 56
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   В
                         1.20
                                0.30
                                        1.00 66
 AGRICULTURAL FAIR COVER
                       17.80
 "PASTURE, DRYLAND"
                                0.30
                                        1.00
 NATURAL FAIR COVER
 "WOODLAND"
                   В
                         2.00
                                 0.30
                                        1.00 60
 NATURAL FAIR COVER
 "GRASS"
                   C 0.20 0.25 1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 7.00 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA(ACRES) = 36.30 SUBAREA RUNOFF(CFS) = 67.26
 EFFECTIVE AREA(ACRES) = 314.20 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.93
 TOTAL AREA (ACRES) = 314.20 PEAK FLOW RATE (CFS) = 584.27
-----
 FLOW PROCESS FROM NODE 3113.00 TO NODE 3114.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 27.83
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.316
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                         8.60 0.25
                                      1.00 79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 10.50 0.20 0.50 75
 NATURAL FAIR COVER
                        0.60 0.20 1.00 83
 "OPEN BRUSH"
                   D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.73
 SUBAREA AREA(ACRES) = 19.70 SUBAREA RUNOFF(CFS) = 38.07
 EFFECTIVE AREA(ACRES) = 333.90 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.92
 TOTAL AREA(ACRES) = 333.90 PEAK FLOW RATE(CFS) = 622.34
 FLOW PROCESS FROM NODE 3114.00 TO NODE 3135.00 IS CODE = 51
______
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 740.00 DOWNSTREAM(FEET) = 710.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1534.00 CHANNEL SLOPE = 0.0196
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 622.34
 FLOW VELOCITY (FEET/SEC.) = 10.44 FLOW DEPTH (FEET) = 5.28
 TRAVEL TIME (MIN.) = 2.45 Tc (MIN.) = 30.28
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3135.00 = 12504.00 FEET.
FLOW PROCESS FROM NODE 3114.00 TO NODE 3135.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 30.28
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.209
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
    TAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                  В
                         4.30
                                0.30
                                       0.50
NATURAL FAIR COVER
 "OPEN BRUSH"
                         2.20
                                0.30
                                       1.00
                   В
                                             66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                         16.30
                                0.30
                                       1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         2.30
                                       1.00 77
                                0.25
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                        0.40
                              0.25 1.00 79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 5.00 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.85
 SUBAREA AREA(ACRES) = 30.50 SUBAREA RUNOFF(CFS) = 54.01
 EFFECTIVE AREA(ACRES) = 364.40 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.91
 TOTAL AREA(ACRES) = 364.40 PEAK FLOW RATE(CFS) = 644.47
.....
 FLOW PROCESS FROM NODE 3114.00 TO NODE 3135.00 IS CODE = 81
_____
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 30.28
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.209
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
                  D 9.70 0.20 1.00 83
 "OPEN BRUSH"
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 1.80 0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 11.50 SUBAREA RUNOFF (CFS) = 20.80
 EFFECTIVE AREA(ACRES) = 375.90 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.92
TOTAL AREA(ACRES) = 375.90 PEAK FLOW RATE(CFS) = 665.26
*******************
 FLOW PROCESS FROM NODE 3135.00 TO NODE 3135.00 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.) = 30.28
 RAINFALL INTENSITY (INCH/HR) = 2.21
 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.26
 AREA-AVERAGED Ap = 0.92
 EFFECTIVE STREAM AREA(ACRES) = 375.90
 TOTAL STREAM AREA(ACRES) = 375.90
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 665.26
*******************
 FLOW PROCESS FROM NODE 3120.00 TO NODE 3121.00 IS CODE = 21
______
 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
______
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 313.00
 ELEVATION DATA: UPSTREAM(FEET) = 1215.00 DOWNSTREAM(FEET) = 1100.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.590
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.577
 SUBAREA To AND LOSS RATE DATA(AMC II):
                                  Fp
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                           Ap SCS Tc
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 NATURAL FAIR COVER
                     С
                           0.70
                                   0.25
                                            1.00 77 8.59
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF(CFS) = 2.73
 TOTAL AREA(ACRES) = 0.70 PEAK FLOW RATE(CFS) =
********************
 FLOW PROCESS FROM NODE 3121.00 TO NODE 3122.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1100.00 DOWNSTREAM(FEET) = 1060.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 261.00 CHANNEL SLOPE = 0.1533
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                            2.73
 FLOW VELOCITY (FEET/SEC.) = 5.65 FLOW DEPTH (FEET) = 0.36
 TRAVEL TIME (MIN.) = 0.77 Tc (MIN.) = 9.36
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3122.00 = 574.00 FEET.
************************
 FLOW PROCESS FROM NODE 3121.00 TO NODE 3122.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 9.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.350
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fp
                                           Аp
                                                  SCS
    LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                            0.10
                                            1.00 69
 "GRASS"
                     B
                                    0.30
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     в 0.70
                                  0.30
                                           1.00 66
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      С
                            0.60
                                   0.25
                                          1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 1.40 SUBAREA RUNOFF(CFS) = 5.13
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EFFECTIVE AREA (ACRES) = 2.10 AREA-AVERAGED Fm(INCH/HR) = 0.27 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 2.10 PEAK FLOW RATE(CFS) =
.....
 FLOW PROCESS FROM NODE 3122.00 TO NODE 3123.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1060.00 DOWNSTREAM(FEET) = 1040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 137.00 CHANNEL SLOPE = 0.1460
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 7.71
 FLOW VELOCITY (FEET/SEC.) = 7.38 FLOW DEPTH (FEET) = 0.64
 TRAVEL TIME (MIN.) = 0.31 Tc (MIN.) = 9.67
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3123.00 = 711.00 FEET.
*****************
 FLOW PROCESS FROM NODE 3122.00 TO NODE 3123.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
______
 MAINLINE TC (MIN) = 9.67
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.258
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                 Fp
                                       Дp
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                          0.20
                                  0.30
                                         1 00
                                               69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    В
                         0.50 0.30 1.00
                                               66
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    С
                         1.20
                                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) = 1.90 SUBAREA RUNOFF(CFS) = 6.82
 EFFECTIVE AREA(ACRES) = 4.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 4.00 PEAK FLOW RATE (CFS) = 14.36
**********************
 FLOW PROCESS FROM NODE 3123.00 TO NODE 3124.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 1040.00 DOWNSTREAM(FEET) = 990.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 450.00 CHANNEL SLOPE = 0.1111
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 14.36
 FLOW VELOCITY (FEET/SEC.) = 7.84 FLOW DEPTH (FEET) = 0.94
 TRAVEL TIME (MIN.) = 0.96 Tc (MIN.) = 10.63
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3124.00 = 1161.00 FEET.
*****************
 FLOW PROCESS FROM NODE 3123.00 TO NODE 3124.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 10.63
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.035
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                       Ap SCS
                                 Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
```

NATURAL FAIR COVER					
"GRASS"	В	0.90	0.30	1.00	69
NATURAL FAIR COVER	2	0.30	0.00	1.00	
"OPEN BRUSH"	В	1.50	0.30	1.00	66
NATURAL FAIR COVER					
"WOODLAND"	В	0.20	0.30	1.00	60
NATURAL FAIR COVER					
"GRASS"	С	0.40	0.25	1.00	79
NATURAL FAIR COVER					
"OPEN BRUSH"	C	1.90	0.25	1.00	77
SUBAREA AVERAGE PERVIO					
SUBAREA AVERAGE PERVIO	OUS AREA FRA	ACTION, Ap	= 1.00		
SUBAREA AREA(ACRES) =	4.90	SUBAREA	RUNOFF (CFS	3) = 16.	57
EFFECTIVE AREA (ACRES)	= 8.90	O AREA-A	VERAGED Fm	(INCH/HR)	= 0.27
AREA-AVERAGED Fp(INCH/					
TOTAL AREA (ACRES) =					30 13
TOTHE INCHI(HORLE)	0.30			,	00.10
******	****	*****	*****	******	*****
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOII					
>>>>TRAVELTIME THRU S					
=======================================					========
ELEVATION DATA: UPSTRE					
CHANNEL LENGTH THRU SU					
CHANNEL BASE (FEET) =				01011	0.0001
MANNING'S FACTOR = 0.0				0.0	
CHANNEL FLOW THRU SUBA				. 0 0	
FLOW VELOCITY (FEET/SEC	1 - 7 3	20.13		- 1 26	
TEATTER TIME (MIN ) -	O 50 TO 1	Z FLOW L		- 1.20	
TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM				00 - 1410	00 5555
LONGESI FLOWPAIR FROM	NODE 312	0.00 IO NO	DE SIZS.	00 - 1413	.UU FEEI.
*****		++++++++	++++++++		+++++++++
FLOW PROCESS FROM NODE					
			2125 00 10	CODE -	
>>>>ADDITION OF SUBAR	REA TO MAIN	LINE PEAK	FLOW<		
>>>>ADDITION OF SUBAR	REA TO MAIN	LINE PEAK	FLOW<		
>>>>ADDITION OF SUBAR	REA TO MAIN	LINE PEAK	FLOW<<<<		
>>>>ADDITION OF SUBARMAINLINE TC(MIN) = 11 * 100 YEAR RAINFALL IN	REA TO MAIN ====================================	LINE PEAK ======== CH/HR) =	FLOW<<<<		
>>>>ADDITION OF SUBAR MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA	REA TO MAIN  1.21  NTENSITY(ING A(AMC II):	LINE PEAK ======== CH/HR) =	FLOW<<<< =================================		
>>>>ADDITION OF SUBAR MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/	REA TO MAIN: 1.21 NTENSITY(ING A(AMC II): SCS SOIL	LINE PEAK  CH/HR) =  AREA	FLOW<<<< =================================	Ap	SCS
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE	REA TO MAIN: 1.21 NTENSITY(ING A(AMC II): SCS SOIL	LINE PEAK  CH/HR) =  AREA	FLOW<<<< =================================	Ap	SCS
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER	REA TO MAIN:  1.21  WTENSITY(ING A (AMC II):  SCS SOIL  GROUP	LINE PEAK  CH/HR) =  AREA (ACRES)	FLOW<<<< 3.917  Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
>>>>ADDITION OF SUBAR MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS"	REA TO MAIN:  1.21  WTENSITY(ING A (AMC II):  SCS SOIL  GROUP	LINE PEAK  CH/HR) =  AREA (ACRES)	FLOW<<<< =================================	Ap (DECIMAL)	SCS CN
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER	REA TO MAIN: 1.21 WTENSITY(IN: A(AMC II): SCS SOIL GROUP B	CH/HR) =  AREA (ACRES) 0.90	FLOW<<<< 3.917 Fp (INCH/HR) 0.30	Ap (DECIMAL)	SCS CN
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND"	REA TO MAIN:  1.21  WTENSITY(ING A (AMC II):  SCS SOIL  GROUP	CH/HR) =  AREA (ACRES)  0.90	FLOW<<<< 3.917 Fp (INCH/HR) 0.30	Ap (DECIMAL)	SCS CN
>>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER	REA TO MAIN:	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20	FLOW<<<< 3.917  Fp (INCH/HR)  0.30  0.30	Ap (DECIMAL) 1.00	SCS CN 69
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	REA TO MAIN:	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20	FLOW<<<< 3.917  Fp (INCH/HR)  0.30  0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 69
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER	REA TO MAIN:	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25	Ap (DECIMAL) 1.00 1.00	SCS CN 69 60
>>>>ADDITION OF SUBAR  ***ANAINLINE TC (MIN) = 11  ***100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS"	REA TO MAIN:	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80	FLOW<<<< 3.917  Fp (INCH/HR)  0.30  0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 69 60
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS"	REA TO MAIN: 1.21 VTENSITY(ING A(AMC II): SCS SOIL GROUP B B C C	LINE PEAK	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25 0.25	Ap (DECIMAL) 1.00 1.00 1.00	SCS CN 69 60 75
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH"	REA TO MAIN: 1.21 VTENSITY(ING A(AMC II): SCS SOIL GROUP B B C C	LINE PEAK	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25	Ap (DECIMAL) 1.00 1.00 1.00	SCS CN 69 60 75
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER	REA TO MAIN: 1.21 VTENSITY(ING A(AMC II): SCS SOIL GROUP B B C C	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25 0.25	Ap (DECIMAL) 1.00 1.00 1.00 1.00	SCS CN 69 60 75 79
>>>>ADDITION OF SUBAR	REA TO MAIN:  1.21  VIENSITY(IN: A(AMC II): SCS SOIL GROUP  B  C  C  C	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80  0.10	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25 0.25 0.25	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 1.00	SCS CN 69 60 75 79
>>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVICE	REA TO MAIN:	LINE PEAK	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25 0.25 0.25 H/HR) = 0.	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 1.00	SCS CN 69 60 75 79
>>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE	REA TO MAIN:	LINE PEAK	FLOW<<<<< ================================	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 26	SCS CN 69 60 75 79 77
>>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVICE	REA TO MAIN:	LINE PEAK	FLOW<<<<< ================================	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 26	SCS CN 69 60 75 79 77
>>>>ADDITION OF SUBARE  ***********************************	REA TO MAIN:	LINE PEAK	FLOW<<<<<================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR)	SCS CN 69 60 75 79 77 73
>>>>ADDITION OF SUBARE MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA AVERAGE PERVIC SUBAREA AREA (ACRES) EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH)	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<< =================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00	SCS CN 69 60 75 79 77 73
>>>>ADDITION OF SUBARE  ***********************************	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<< =================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00	SCS CN 69 60 75 79 77 73
>>>>ADDITION OF SUBARE MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA AVERAGE PERVIC SUBAREA AREA (ACRES) EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH)	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<< =================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00	SCS CN 69 60 75 79 77 73
>>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS"  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS"  NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE SUBAREA AREA (ACRES) EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH)	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<<< ================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  26  8) = 12. (INCH/HR) = 1.00 TS) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA AVERAGE PE PERVIC SUBAREA AVERAGE PE PERVIC SUBAREA AVERAGE PERVIC SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH/ TOTAL AREA (ACRES) =	REA TO MAIN:	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80  0.10  TE, FP(INC ACTION, AP SUBAREA 0 AREA-AV PEAK F	FLOW<<<<< ================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00 TS) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH TOTAL AREA (ACRES) =	REA TO MAIN:	LINE PEAK	FLOW<<<<< ================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00 rs) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA FAIR SUBAREA (ACRES) =  ***********************************	TEA TO MAIN:    Comparison of the comparison of	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80  0.10  TE, Fp(INC ACTION, Ap SUBAREA 0 AREA-AV PEAK F  ***********************************	FLOW<-< TLOW<	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00 rs) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA FAIR (ACRES) =  EFFECTIVE AREA (ACRES) =  ***********************************	TEA TO MAIN:  ===================================	LINE PEAK	FLOW<<<<<================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00 rs) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA AVERAGE FERVIC SUBAREA FERVIC SU	REA TO MAIN:  1.21  VITENSITY(ING A(AMC II): SCS SOIL GROUP  B  C  C  C  C  C  C  C  C  C  C  C  C	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80  0.10  TE, FP(INC ACTION, AP SUBAREA 0 AREA-AV PEAK F  *********** TO NODE  FLOW<<<< </td <td>FLOW&lt;-&lt;- "TOW&lt;-&lt; "TOW&lt; "TOW<!-- "TOW</ "TOW</ "TOW</---> "TOW<!-----> "TOW</td> <td>Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  S) = 12. (INCH/HR) = 1.00 FS) =  ***********************************</td> <td>SCS CN 69 60 75 79 77 73 82 = 0.27 42.01 ************************************</td>	FLOW<-<- "TOW<-< "TOW< "TOW "TOW</ "TOW</ "TOW</- "TOW - "TOW	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  S) = 12. (INCH/HR) = 1.00 FS) =  ***********************************	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01 ************************************

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ELEVATION DATA: UPSTREAM(FEET) = 975.00 DOWNSTREAM(FEET) = 970.0 CHANNEL LENGTH THRU SUBAREA(FEET) = 109.00 CHANNEL SLOPE = 0.0459
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 42.01
 FLOW VELOCITY (FEET/SEC.) = 7.31 FLOW DEPTH (FEET) = 1.60
 TRAVEL TIME (MIN.) = 0.25 Tc (MIN.) = 11.46
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3126.00 = 1528.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3125.00 TO NODE 3126.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 11.46
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.868
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fρ
                                        Ap SCS
   LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.10
                                  0.30
                                        1.00
                                               6.3
 NATURAL FAIR COVER
 "GRASS"
                         1.30 0.30
                                        1.00
                    В
                                               69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          0.90 0.30
                    В
                                        1 00
                                               66
 AGRICULTURAL FAIR COVER
                          0.10
                                0.30
 "PASTURE, DRYLAND" B
                                         1.00
 NATURAL FAIR COVER
 "WOODLAND"
                         1.10 0.30 1.00
                                               60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C
                        0.60
                                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) = 4.10 SUBAREA RUNOFF (CFS) = 13.19
 EFFECTIVE AREA(ACRES) = 16.90 AREA-AVERAGED Fm(INCH/HR) = 0.28
 AREA-AVERAGED Fp(INCH/HR) = 0.28 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 16.90 PEAK FLOW RATE(CFS) = 54.63
*******************
 FLOW PROCESS FROM NODE 3125.00 TO NODE 3126.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 11.46
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.868
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                        Ap
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "GRASS"
                         0.40 0.25 1.00 79
 NATURAL FAIR COVER
                         4.00 0.25 1.00 77
 "OPEN BRUSH"
 NATURAL FAIR COVER
 "WOODLAND"
                   C
                         0.30 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) = 4.70 SUBAREA RUNOFF(CFS) = 15.30
 EFFECTIVE AREA(ACRES) = 21.60 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 21.60 PEAK FLOW RATE(CFS) =
                                            69 94
*****************
 FLOW PROCESS FROM NODE 3126.00 TO NODE 3127.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
```

```
ELEVATION DATA: UPSTREAM(FEET) = 970.00 DOWNSTREAM(FEET) = 940.0
CHANNEL LENGTH THRU SUBAREA(FEET) = 696.00 CHANNEL SLOPE = 0.0431
                                                     940.00
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                             69.94
 FLOW VELOCITY (FEET/SEC.) = 8.06 FLOW DEPTH (FEET) = 1.81
 TRAVEL TIME (MIN.) = 1.44 Tc (MIN.) = 12.90
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3127.00 = 2224.00 FEET.
******************
 FLOW PROCESS FROM NODE 3126.00 TO NODE 3127.00 IS CODE = 81
-----
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 12.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.602
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                    SCS SOIL AREA
                                    Fp
                                             Ap
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                             2.70
                                     0.30
                                             1.00
                                                    63
 AGRICULTURAL FAIR COVER
                             1.50
 "PASTURE, DRYLAND"
                      В
                                     0.30
                                             1.00
                                                   69
 NATURAL FAIR COVER
                             0.50
                                     0.30
 "MOODT.AND"
                                             1.00
                      B
                                                   60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                             2.60
                                     0.25
                                             1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      C
                             1.80
                                     0.25
                                             1.00
                                                   77
 NATURAL FAIR COVER
                                     0.25
                      C
                             0.20
                                             1.00 73
 "WOODLAND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 9.30
                            SUBAREA RUNOFF(CFS) = 27.85
 EFFECTIVE AREA(ACRES) = 30.90 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 30.90
                            PEAK FLOW RATE(CFS) =
                                                   92.62
******************
 FLOW PROCESS FROM NODE 3127.00 TO NODE 3128.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <><<
-----
 ELEVATION DATA: UPSTREAM(FEET) = 940.00 DOWNSTREAM(FEET) = 920.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 511.00 CHANNEL SLOPE = 0.0391
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                             92.62
 FLOW VELOCITY (FEET/SEC.) = 8.38 FLOW DEPTH (FEET) = 2.15
 TRAVEL TIME (MIN.) = 1.02 Tc (MIN.) = 13.92
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3128.00 = 2735.00 FEET.
*************************
 FLOW PROCESS FROM NODE 3127.00 TO NODE 3128.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE TC(MIN) = 13.92
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.456
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                    Fρ
                                            Аp
                                                   SCS
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                      В
                             3.00
                                     0.30
                                             1.00
                                                    63
 NATURAL FAIR COVER
 "OPEN BRUSH"
                             1.40
                                     0.30
                                             1.00
                      В
                                                    66
```

AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	В	8.40	0.30	1.00	69
NATURAL FAIR COVER "WOODLAND"			0.30		
NATURAL FAIR COVER	ь	0.20	0.30	1.00	00
"CHAPARRAL, BROADLEAF" NATURAL FAIR COVER	С	8.00	0.25	1.00	75
"OPEN BRUSH"	С	5.20	0.25	1.00	77
SUBAREA AVERAGE PERVIOUS					
SUBAREA AVERAGE PERVIOUS	AREA FR	ACTION, Ap	= 1.00		\ 1
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	26.20	SUBAREA O AREA-A	RUNOFF(CFS VERAGED Fm(	) = /5.U TNCH/HR) =	) <u> </u> = 0 27
AREA-AVERAGED Fp(INCH/HF	(a) = 0.2	7 AREA-AV	ERAGED Ap =	1.00	
TOTAL AREA(ACRES) =	57.10	PEAK F	LOW RATE (CF:	S) = 1	.63.57
******	*****	*****	****	******	*****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA	TO MAIN	LINE PEAK	FLOW<		
MAINLINE Tc (MIN) = 13.9			=======		
* 100 YEAR RAINFALL INTE		CH/HR) =	3.456		
SUBAREA LOSS RATE DATA(A	MC II):		_		
DEVELOPMENT TYPE/ LAND USE	SCS SOIL	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS
AGRICULTURAL FAIR COVER					
"PASTURE, DRYLAND"	С	1.00	0.25	1.00	79
"PASTURE, DRYLAND" NATURAL FAIR COVER "WOODLAND"	С	0.50	0.25	1.00	73
SUBAREA AVERAGE PERVIOUS					, 0
SUBAREA AVERAGE PERVIOUS					
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =					
AREA-AVERAGED Fp(INCH/HR	= 0.2	7 AREA-AV	ERAGED Ap =	1.00	
TOTAL AREA(ACRES) =	58.60	PEAK F	LOW RATE (CF	S) = 1	67.90
******	*****	*****	****	******	*****
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDAL					
>>>>TRAVELTIME THRU SUE					
ELEVATION DATA: UPSTREAM CHANNEL LENGTH THRU SUBA					
CHANNEL BASE (FEET) =	3.00 "	Z" FACTOR :	= 1.000		0.0010
MANNING'S FACTOR = 0.040				00	
CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.)				= 2.72	
TRAVEL TIME (MIN.) = 1.	51 Tc(	MIN.) = 1	5.43		
LONGEST FLOWPATH FROM NO	DE 312	0.00 TO NO	DE 3129.0	0 = 3715.	00 FEET.
******	*****	*****	****	******	*****
FLOW PROCESS FROM NODE	3128.00	TO NODE	3129.00 IS	CODE = 8	31
>>>>ADDITION OF SUBAREA			FLOW<		
MAINLINE TC(MIN) = 15.4					
* 100 YEAR RAINFALL INTE			3.252		
SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/	MC II): SCS SOIL		Fp	Дp	SCS
LAND USE			(INCH/HR)		CN
NATURAL FAIR COVER				,	
"CHAPARRAL, BROADLEAF" AGRICULTURAL FAIR COVER	В	0.90	0.30	1.00	63
"PASTURE, DRYLAND"	В	11.50	0.30	1.00	69
NATURAL FAIR COVER "WOODLAND"	В	0.90	0 30	1.00	60
	D	0.90	0.30	1.00	UU

NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	С	2.10	0.25	1.00	75	
NATURAL FAIR COVER "OPEN BRUSH"		7.30	0.25	1.00	77	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	C		0.25		79	
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS	AREA FR	ACTION, A	0 = 1.00		2.1	
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	87.4	SUBAREA AREA-	A RUNOFF (CF AVERAGED Fm	(INCH/HR)	= 0.27	
AREA-AVERAGED Fp(INCH/HF	R) = 0.2	7 AREA-A	VERAGED Ap	= 1.00		
TOTAL AREA(ACRES) =						
**************************************	3128.00	TO NODE	3129.00 I	S CODE =	81	
>>>>ADDITION OF SUBAREA						
MAINLINE TC(MIN) = 15.4	13					
* 100 YEAR RAINFALL INTE			3.252			
SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/	SCS SOIL	AREA	Fρ	Ap	SCS	
DEVELOPMENT TYPE/ LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
NATURAL FAIR COVER "WOODLAND"	C	2 20	0.25	1 00	72	
SUBAREA AVERAGE PERVIOUS					73	
SUBAREA AVERAGE PERVIOUS	AREA FR	ACTION, A	p = 1.00			
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	3.30	SUBARE	A RUNOFF(CF	S) = 8.	92	
AREA-AVERAGED Fp(INCH/HF	R) = 0.2	7 AREA-A	VERAGED Ap	= 1.00		
TOTAL AREA (ACRES) =	90.70	PEAK 1	FLOW RATE (C	FS) =	243.25	
******	. * * * * * * * * *	******	*****	******	*****	
FLOW PROCESS FROM NODE						
>>>>COMPUTE TRAPEZOIDAI >>>>TRAVELTIME THRU SUE	BAREA (EX	ISTING EL	EMENT) <<<<			
ELEVATION DATA: UPSTREAM						
CHANNEL LENGTH THRU SUBA	REA (FEET	918	.00 CHANN			
CHANNEL BASE (FEET) =				0.0		
MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE				.00		
FLOW VELOCITY (FEET/SEC.)	= 9.9	FLOW I	DEPTH (FEET)	= 3.32		
TRAVEL TIME $(MIN.) = 1$ .	53 Tc(1	MIN.) = 0	16.96		00 5555	
LONGEST FLOWPATH FROM NO	)DE 312	J.00 TO NO	JDE 3130.	00 = 4633	.UU FEET.	
********	****					
FLOW PROCESS FROM NODE		TO NODE	3130.00 I	S CODE =	81	
>>>>ADDITION OF SUBAREA	TO MAIN	TO NODE	3130.00 I FLOW<	S CODE =	81	
>>>>ADDITION OF SUBAREA	TO MAIN	TO NODE	3130.00 I FLOW<	S CODE =	81	
>>>>ADDITION OF SUBAREA	TO MAIN	TO NODE	3130.00 I	S CODE =	81	
>>>>ADDITION OF SUBAREA ====================================	TO MAINE TO MAINE TO MAINE TO MAINE TO MAINE TO MAINE TO MAINE	TO NODE LINE PEAK CH/HR) =	3130.00 I	S CODE =	81	
>>>>ADDITION OF SUBAREA MAINLINE TC (MIN) = 16.5 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/	TO MAIN	TO NODE LINE PEAK CH/HR) = AREA	3130.00 I FLOW<>>> 3.080	S CODE =	81  SCS	
>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 16.5  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE	TO MAINE TO	TO NODE LINE PEAK CH/HR) =	3130.00 I FLOW<>>> 3.080	S CODE =	81  SCS	
>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 16.5  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	TO MAIN	TO NODE LINE PEAK CH/HR) = AREA	3130.00 I FLOW<>>> 3.080	S CODE =	81  SCS	
>>>>ADDITION OF SUBAREA	A TO MAIN: OF CONSITY (INC. MC II): SCS SOIL GROUP B	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.90	3130.00 I FLOW<<<< 3.080 Fp (INCH/HR) 0.30	Ap (DECIMAL)	81  SCS CN 63	
>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 16.5  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "OPEN BRUSH"	A TO MAIN:  66 CNSITY(ING AMC II): SCS SOIL GROUP	TO NODE LINE PEAK CH/HR) = AREA (ACRES)	3130.00 I FLOW<><< 3.080 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	
>>>> ADDITION OF SUBAREA  ***TON YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	A TO MAIN: OF CONSITY (INC. MC II): SCS SOIL GROUP B	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.90	3130.00 I FLOW<<<< 3.080 Fp (INCH/HR) 0.30	Ap (DECIMAL)	81  SCS CN 63	
>>>>>ADDITION OF SUBAREA	A TO MAIN:  106  10NSITY(IN  11):  11  12  13  14  15  16  16  17  17  17  18  18  18  18  18  18  18	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.90 1.80 26.80	3130.00 I FLOW<<<< 3.080 Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 63 66	
>>>> ADDITION OF SUBAREA  ***TON YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	A TO MAIN: 06 NNSITY(ING MC II): SCS SOIL GROUP B B	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  1.80	3130.00 I FLOW<<<< 3.080 Fp (INCH/HR) 0.30 0.30	Ap (DECIMAL) 1.00	SCS CN 63	

```
NATURAL FAIR COVER
                         14.60 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 55.40 SUBAREA RUNOFF(CFS) = 139.73
 EFFECTIVE AREA(ACRES) = 146.10 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 146.10 PEAK FLOW RATE (CFS) =
******************
 FLOW PROCESS FROM NODE 3129.00 TO NODE 3130.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC(MIN) = 16.96
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.080
 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
                         7.00 0.25 1.00 79
 "PASTURE, DRYLAND"
                C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 7.00 SUBAREA RUNOFF(CFS) = 17.83
 EFFECTIVE AREA(ACRES) = 153.10 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp (INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 153.10 PEAK FLOW RATE(CFS) = 386.81
*******************
 FLOW PROCESS FROM NODE 3130.00 TO NODE 3131.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 840.00 DOWNSTREAM(FEET) = 820.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 882.00 CHANNEL SLOPE = 0.0227
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 386.81
 FLOW VELOCITY (FEET/SEC.) = 9.80 FLOW DEPTH (FEET) = 4.26
 TRAVEL TIME (MIN.) = 1.50 Tc (MIN.) = 18.46
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3131.00 = 5515.00 FEET.
*****
 FLOW PROCESS FROM NODE 3130.00 TO NODE 3131.00 IS CODE = 81
._____
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 18.46
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.935
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fo
                                        Ap SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           2.80
                                  0.30
                                          1.00
 AGRICULTURAL FAIR COVER
                          22.40
                                  0.30
 "PASTURE, DRYLAND"
                                          1.00
                                                69
 NATURAL FAIR COVER
 "WOODLAND"
                           2.00
                                  0.30
                                         1 00
                                                60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          4.90
                                  0.25
                                          1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          20.20
                                  0.25
                                         1.00 77
 AGRICULTURAL FAIR COVER
                    С
                                  0.25 1.00 79
 "PASTURE, DRYLAND"
                           9.80
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
```

```
SUBAREA AREA(ACRES) = 62.10 SUBAREA RUNOFF(CFS) = 148.86 EFFECTIVE AREA(ACRES) = 215.20 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 215.20
                          PEAK FLOW RATE(CFS) = 515.70
FLOW PROCESS FROM NODE 3130.00 TO NODE 3131.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TO (MIN) = 18 46
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.935
 SUBAREA LOSS RATE DATA(AMC II):
                SCS SOIL AREA
                                 Fp Ap SCS
  DEVELOPMENT TYPE/
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                                 0.25 1.00 73
 "WOODLAND"
                     C
                          1.80
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 1.80
                           SUBAREA RUNOFF(CFS) = 4.35
 EFFECTIVE AREA(ACRES) = 217.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 217.00 PEAK FLOW RATE(CFS) = 520.05
********************
 FLOW PROCESS FROM NODE 3131.00 TO NODE 3132.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 820.00 DOWNSTREAM(FEET) = 800.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 901.00 CHANNEL SLOPE = 0.0222
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 520.05
 FLOW VELOCITY (FEET/SEC.) = 10.47 FLOW DEPTH (FEET) = 4.98
 TRAVEL TIME (MIN.) = 1.43 Tc (MIN.) = 19.90
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3132.00 = 6416.00 FEET.
*****
 FLOW PROCESS FROM NODE 3131.00 TO NODE 3132.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
.______
 MAINLINE Tc (MIN) = 19.90
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.809
 SUBAREA LOSS RATE DATA(AMC II):
                                          Ap SCS
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           0.90
                     В
                                    0.30
                                           1.00 63
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     B
                           4.00
                                    0.30
                                           1.00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           25.00
                                    0.30
                                           1.00
 NATURAL FAIR COVER
                           1.80
 "WOODLAND"
                     B
                                    0.30
                                           1.00 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           3.90
                                 0.25
                     C
                                         1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          24.80
                                 0.25 1.00 77
                     C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 60.40 SUBAREA RUNOFF(CFS) = 137.69
 EFFECTIVE AREA(ACRES) = 277.40 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 277.40 PEAK FLOW RATE(CFS) =
                                                633.09
```

```
*****
FLOW PROCESS FROM NODE 3131.00 TO NODE 3132.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
______
 MAINIJINE\ Tc(MIN) = 19.90
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.809
 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
                       11.10 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) = 11.10 SUBAREA RUNOFF(CFS) = 25.57
 EFFECTIVE AREA(ACRES) = 288.50 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 288.50 PEAK FLOW RATE(CFS) = 658.66
*******************
FLOW PROCESS FROM NODE 3132.00 TO NODE 3133.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 800.00 DOWNSTREAM(FEET) = 780.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 940.00 CHANNEL SLOPE = 0.0213
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 658.66
 FLOW VELOCITY (FEET/SEC.) = 10.93 FLOW DEPTH (FEET) = 5.32
 TRAVEL TIME (MIN.) = 1.43 Tc (MIN.) = 21.33
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3133.00 = 7356.00 FEET.
FLOW PROCESS FROM NODE 3132.00 TO NODE 3133.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 21.33
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.699
 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"
                          2.50
                                 0.30
                                        1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    В
                         22.20
                                 0.30
                                       1.00
                                             69
 NATURAL FAIR COVER
 "GRASS"
                   C
                        0.40
                               0.25
                                      1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         20.10 0.25 1.00 77
 AGRICULTURAL FAIR COVER
                  C
                        6.60 0.25 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 51.80 SUBAREA RUNOFF(CFS) = 113.06
 EFFECTIVE AREA(ACRES) = 340.30 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 340.30 PEAK FLOW RATE(CFS) = 743.11
******************
 FLOW PROCESS FROM NODE 3133.00 TO NODE 3134.00 IS CODE = 51
______
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
```

```
______
 ELEVATION DATA: UPSTREAM(FEET) = 780.00 DOWNSTREAM(FEET) = 765.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 596.00 CHANNEL SLOPE = 0.0252
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 743.11
 FLOW VELOCITY (FEET/SEC.) = 12.00 FLOW DEPTH (FEET) = 5.42
 TRAVEL TIME (MIN.) = 0.83 Tc (MIN.) = 22.16
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3134.00 = 7952.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3133.00 TO NODE 3134.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 22.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.636
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   В
                         15.60
                                  0.30
                                         1.00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                   B 55.20
                                  0.30
                                         1 00 69
 NATURAL FAIR COVER
 "WOODLAND"
                   В
                         3.60
                                  0.30
                                         1.00 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                   C
                         0.10
                                0.25
                                         1.00
                                               7.5
 NATURAL FAIR COVER
                   C 75.10
                               0.25 1.00 77
 "OPEN BRUSH"
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                        28.10 0.25 1.00 79
                   C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 177.70 SUBAREA RUNOFF(CFS) = 378.26
 EFFECTIVE AREA(ACRES) = 518.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 518.00 PEAK FLOW RATE(CFS) = 1102.10
*****
 FLOW PROCESS FROM NODE 3133.00 TO NODE 3134.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
-----
 MAINLINE Tc (MIN) = 22.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.636
 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
                 С
                         1.50 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) = 1.50 SUBAREA RUNOFF (CFS) = 3.22
 EFFECTIVE AREA(ACRES) = 519.50 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 519.50 PEAK FLOW RATE (CFS) = 1105.32
*******************
 FLOW PROCESS FROM NODE 3134.00 TO NODE 3135.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
-----
 ELEVATION DATA: UPSTREAM(FEET) = 765.00 DOWNSTREAM(FEET) = 710.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 2076.00 CHANNEL SLOPE = 0.0265
 CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
```

```
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1105.32
 FLOW VELOCITY (FEET/SEC.) = 13.51 FLOW DEPTH (FEET) = 6.20
 TRAVEL TIME (MIN.) = 2.56 Tc (MIN.) = 24.72
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3135.00 = 10028.00 FEET.
*******************
FLOW PROCESS FROM NODE 3134.00 TO NODE 3135.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 24.72
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.477
 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"
                              4 10
                                       0.30
                                               1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                              39 20
                                      0.30
                                              1 00
                                                      69
 NATURAL FAIR COVER
 "WOODLAND"
                             0.40
                                     0.30
                                              1.00
 NATURAL FAIR COVER
 "OPEN BRUSH" C 26.40 0.25 1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C 7.10 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) = 77.20 SUBAREA RUNOFF(CFS) = 152.76
 EFFECTIVE AREA(ACRES) = 596.70 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 596.70 PEAK FLOW RATE(CFS) = 1183.64
******************
FLOW PROCESS FROM NODE 3135.00 TO NODE 3135.00 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.) = 24.72
 RAINFALL INTENSITY (INCH/HR) = 2.48
 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp (INCH/HR) = 0.27
 AREA-AVERAGED Ap = 1.00
 EFFECTIVE STREAM AREA(ACRES) = 596.70
 TOTAL STREAM AREA(ACRES) = 596.70
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 1183.64
 ** CONFLUENCE DATA **
  STREAM Q TC Intensity Fp(Fm) Ap Ae HEADWATER NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
  1 665.26 30.28 2.209 0.26(0.24) 0.92 375.9 3100.00
   2 1183.64 24.72 2.477 0.27(0.27) 1.00 596.7 3120.00
 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 1800.61 24.72 2.477 0.27(0.26) 0.97 903.6 3120.00
2 1705.26 30.28 2.209 0.27(0.26) 0.97 972.6 3100.00
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE (CFS) = 1800.61 Tc (MIN.) = 24.72
```

```
EFFECTIVE AREA(ACRES) = 903.57 AREA-AVERAGED Fm(INCH/HR) = 0.26
AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 972.60
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3135.00 = 12504.00 FEET.
FLOW PROCESS FROM NODE 3135.00 TO NODE 3136.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 710.00 DOWNSTREAM(FEET) = 690.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1157.00 CHANNEL SLOPE = 0.0173
 CHANNEL BASE (FEET) = 9.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 9.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1800.61
 FLOW VELOCITY (FEET/SEC.) = 13.00 FLOW DEPTH (FEET) = 8.10
 TRAVEL TIME (MIN.) = 1.48 Tc (MIN.) = 26.20
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3136.00 = 13661.00 FEET.
*****
 FLOW PROCESS FROM NODE 3135.00 TO NODE 3136.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 26.20
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.397
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 RESIDENTIAL.
 "5-7 DWELLINGS/ACRE"
                  B
                           6.80
                                   0.30
                                           0.50
                                                 56
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          3.20
                                   0.30
                    B
                                          1 00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     в 28.90
                                   0.30
                                          1 00
 NATURAL FAIR COVER
 "MOODI.AND"
                    в 0.40
                                   0.30
                                          1.00 60
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C
                          4.50
                                   0.25
                                         1.00 77
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                          2.90
                                 0.20 0.50 75
                   D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.90
 SUBAREA AREA(ACRES) = 46.70 SUBAREA RUNOFF(CFS) = 89.80
 EFFECTIVE AREA(ACRES) = 950.27 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1019.30
                           PEAK FLOW RATE(CFS) = 1825.86
*******************
 FLOW PROCESS FROM NODE 3135.00 TO NODE 3136.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 26.20
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.397
 SUBAREA LOSS RATE DATA(AMC II):
                                Fp
                                         Ap
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                    D 11.70
                                   0.20
 "OPEN BRUSH"
                                           1.00 83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     D
                          9.10
                                 0.20
                                         1.00 84
 NATURAL FAIR COVER
                                 0.20 1.00 79
 "WOODLAND"
                     D
                          0.20
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
```

```
SUBAREA AREA(ACRES) = 21.00 SUBAREA RUNOFF(CFS) = 41.53
EFFECTIVE AREA(ACRES) = 971.27 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 1040.30 PEAK FLOW RATE (CFS) = 1867.40
FLOW PROCESS FROM NODE 3136.00 TO NODE 3137.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 690.00 DOWNSTREAM(FEET) = 685.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 609.00 CHANNEL SLOPE = 0.0082
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1867.40
 FLOW VELOCITY (FEET/SEC.) = 9.92 FLOW DEPTH (FEET) = 9.60
 TRAVEL TIME (MIN.) = 1.02 Tc (MIN.) = 27.22
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3137.00 = 14270.00 FEET.
*****
 FLOW PROCESS FROM NODE 3136.00 TO NODE 3137.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 27.22
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.344
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                            5 80
                                    0.30
                                           0.50
                     B
 NATURAL FAIR COVER
 "GRASS"
                            0.40
                                   0.30
                                           1.00
                                                 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            3 80
                                   0.30
                                           1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           32.50 0.30
                                          1.00
                                                 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           29.80 0.25 1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C
                           3.60
                                 0.25 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96
 SUBAREA AREA(ACRES) = 75.90 SUBAREA RUNOFF(CFS) = 141.93
 EFFECTIVE AREA(ACRES) = 1047.17 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1116.20
                           PEAK FLOW RATE(CFS) = 1962.84
*******************
FLOW PROCESS FROM NODE 3136.00 TO NODE 3137.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 27.22
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.344
 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"
                            0.40
                                    0.20
                                           0.50 75
                     D
 NATURAL FAIR COVER
 "GRASS"
                     D
                            0.40
                                    0.20
                                           1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           10.30
                                    0.20
                                           1.00
                                                 8.3
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           11.00
                                    0.20
                                           1.00 84
```

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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 22.10 SUBAREA RUNOFF(CFS) = 42.69
 EFFECTIVE AREA(ACRES) = 1069.27 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1138.30
                          PEAK FLOW RATE(CFS) = 2005.52
FLOW PROCESS FROM NODE 3137.00 TO NODE 3138.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 685.00 DOWNSTREAM(FEET) = 675.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 740.00 CHANNEL SLOPE = 0.0135
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2005.52
 FLOW VELOCITY (FEET/SEC.) = 12.17 FLOW DEPTH (FEET) = 8.78
 TRAVEL TIME (MIN.) = 1.01 Tc (MIN.) = 28.24
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3138.00 = 15010.00 FEET.
*****
 FLOW PROCESS FROM NODE 3137.00 TO NODE 3138.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 28.24
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.298
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                        Ap
                                  Fp
                                               SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                          20.70
                                   0.30
                                          0.50
                  B
                                                56
 NATURAL FAIR COVER
                          1.50
                                   0.30
                                          1 00
                                                66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     в 6.20
                                   0.30
                                          1.00
                                                69
 NATURAL FAIR COVER
                          0.40
 "OPEN BRUSH"
                    C
                                   0.25
                                          1.00
                                                77
 RESIDENTIAL.
 "5-7 DWELLINGS/ACRE" D
                        11.70
                                   0.20
                                         0.50
                                                7.5
 NATURAL FAIR COVER
 "GRASS"
                    D
                           2.10
                                  0.20
                                        1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.62
 SUBAREA AREA(ACRES) = 42.60 SUBAREA RUNOFF(CFS) = 81.69
 EFFECTIVE AREA(ACRES) = 1111.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1180.90
                          PEAK FLOW RATE (CFS) = 2042.18
*******************
 FLOW PROCESS FROM NODE 3137.00 TO NODE 3138.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 28.24
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.298
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                         Ap
                                               SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    D
                        12.40
                                0.20
                                        1.00 83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    D 3.30
                                0.20 1.00 84
 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) = 15.70 SUBAREA RUNOFF(CFS) = 29.64
EFFECTIVE AREA(ACRES) = 1127.57 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA (ACRES) = 1196.60 PEAK FLOW RATE (CFS) = 2071.82
FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 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) = 977.00 CHANNEL SLOPE = 0.0205
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2071.82
 FLOW VELOCITY (FEET/SEC.) = 14.33 FLOW DEPTH (FEET) = 8.02
 TRAVEL TIME (MIN.) = 1.14 Tc (MIN.) = 29.37
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3139.00 = 15987.00 FEET.
*****
 FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 29.37
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.248
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fp
                                         αA
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                            0 40
                                    0.30
                                           1.00
                     B
                                                  63
 AGRICULTURAL POOR COVER
 "FALLOW"
                            8.60
                                   0.30
                                           1.00
                                                 86
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                          1 00 0 30
                                           0.50
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     в 9.70 0.30 1.00
                                                  66
 COMMERCIAL
                          5.60 0.30 0.10
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    В
                          12.10
                                 0.30 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.85
 SUBAREA AREA(ACRES) = 37.40 SUBAREA RUNOFF(CFS) = 67.05
 EFFECTIVE AREA(ACRES) = 1164.97 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1234.00 PEAK FLOW RATE(CFS) = 2088.12
*****
 FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 29.37
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.248
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                  Fp
                                          Aр
                                                SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "WOODLAND"
                            0.20
                                    0.30
                                           1 00
                                                  60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                            5.40
                                   0.25
                                           1.00
                                                75
 AGRICULTURAL POOR COVER
 "FALLOW"
                            1.30
                                    0.25
                                           1.00
                                                  91
 NATURAL POOR COVER
 "BARREN"
                            4.00 0.25
                                         1.00 91
 NATURAL FAIR COVER
```

```
"OPEN BRUSH"
                    С
                          20.10
                                  0.25
                                         1.00
                                  0.25 1.00
0.25 0.10
                           2.70
 COMMERCIAL
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
 SUBAREA AREA(ACRES) = 33.70 SUBAREA RUNOFF(CFS) = 61.12
 EFFECTIVE AREA(ACRES) = 1198.67 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1267.70 PEAK FLOW RATE(CFS) = 2149.24
******************
 FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 29.37
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.248
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                Fp
                                              SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                                  0.25
                                               79
                          1.10
                                         1.00
 NATURAL FAIR COVER
                         2.80
                    C
                                0.25
                                        1.00
                                               7.3
 AGRICULTURAL POOR COVER
                                               94
 "FALLOW"
                         2.20
                                  0.20
                                        1.00
 NATURAL FAIR COVER
                         1 90
                                0.20
                                       1 00 84
 "GRASS"
                    D
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    D
                        17.50
                                0.20
                                        1.00 83
                                0.20 0.10 75
 COMMERCIAL
                    D
                         2.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
 SUBAREA AREA(ACRES) = 27.50 SUBAREA RUNOFF(CFS) = 50.82
 EFFECTIVE AREA(ACRES) = 1226.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1295.20
                         PEAK FLOW RATE(CFS) = 2200.07
FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 29.37
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.248
 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
                         1.40 0.20 1.00 84
 "PASTURE, DRYLAND" D
 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) = 2.58
 EFFECTIVE AREA(ACRES) = 1227.57 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1296.60
                         PEAK FLOW RATE(CFS) = 2202.65
******************
 FLOW PROCESS FROM NODE 3139.00 TO NODE 3140.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 655.00 DOWNSTREAM(FEET) = 640.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 701.00 CHANNEL SLOPE = 0.0214
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2202.65
```

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FLOW VELOCITY (FEET/SEC.) = 14.79 FLOW DEPTH (FEET) = 8.19 TRAVEL TIME (MIN.) = 0.79 Tc (MIN.) = 30.16
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3140.00 = 16688.00 FEET.
FLOW PROCESS FROM NODE 3139.00 TO NODE 3140.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC(MIN) = 30.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.214
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                SCS SOIL AREA
                                  Fρ
                                         An
                                                SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           26.00
                                    0.30
                                           1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            5 80
                                   0.30
                                           1.00
                                                 66
 NATURAL GOOD COVER
 "MEADOWS"
                            0.90
                                   0.30
                                           1 00
                                                 5.8
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                            1.00
                                   0.30
                                           1.00
 NATURAL FAIR COVER
 "WOODLAND"
                           2.80 0.30
                                         1.00
                                                 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                   C
                          1.80 0.25 1.00 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 38.30
                         SUBAREA RUNOFF(CFS) = 66.05
 EFFECTIVE AREA(ACRES) = 1265.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
                           PEAK FLOW RATE(CFS) = 2231.38
 TOTAL AREA(ACRES) = 1334.90
*******************
FLOW PROCESS FROM NODE 3139.00 TO NODE 3140.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 30.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.214
 SUBAREA LOSS RATE DATA (AMC II):
                                Fp
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                         Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                            5 60
                                   0.25
                                           1.00
                                                 91
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           28.50
                                   0.25
                                           1.00
                                                 77
 NATURAL GOOD COVER
 "MEADOWS"
                            0.20
                                   0.25
                                           1.00
                                                 71
 NATURAL FAIR COVER
 "WOODLAND"
                           1.80
                                   0.25
                                           1.00
                                                 7.3
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           0.10 0.20
                                           1.00
                                                 81
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                   D
                          0.20 0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 36.40 SUBAREA RUNOFF(CFS) = 64.35
 EFFECTIVE AREA(ACRES) = 1302.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1371.30 PEAK FLOW RATE(CFS) = 2295.73
*****
 FLOW PROCESS FROM NODE 3140.00 TO NODE 3141.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
```

```
______
 ELEVATION DATA: UPSTREAM(FEET) = 640.00 DOWNSTREAM(FEET) = 620.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 903.00 CHANNEL SLOPE = 0.0221
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2295.73
 FLOW VELOCITY (FEET/SEC.) = 15.15 FLOW DEPTH (FEET) = 8.29
 TRAVEL TIME (MIN.) = 0.99 Tc (MIN.) = 31.16
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3141.00 = 17591.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3140.00 TO NODE 3141.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 31.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.176
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
                         38.40
                                  0.30
                                         1.00 86
 NATURAL FAIR COVER
 "GRASS"
                   в 0.20
                                  0.30
                                        1.00 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   в 3.70 0.30
                                       1.00 66
 COMMERCIAL
                   в 0.60 0.30
                                       0.10 56
 NATURAL FAIR COVER
                       0.90
                                0.30
                                       1.00 60
 "WOODI.AND"
                   B
 AGRICULTURAL POOR COVER
 "FALLOW"
                   C
                        0.80 0.25 1.00 91
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 44.60 SUBAREA RUNOFF(CFS) = 75.48
 EFFECTIVE AREA(ACRES) = 1346.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp (INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1415.90 PEAK FLOW RATE(CFS) = 2326.95
*******************
 FLOW PROCESS FROM NODE 3140.00 TO NODE 3141.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 31.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.176
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                       Ap SCS
                                Fρ
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                    D
                          2.60
                                  0.20
                                         1.00 81
 AGRICULTURAL POOR COVER
 "FAT.LOW"
                         8.90
                                0.20
                                        1.00
 NATURAL POOR COVER
 "BARREN"
                    D
                         0.60
                                  0.20
                                        1.00 93
 NATURAL FAIR COVER
 "GRASS"
                   D
                         1.40
                                  0.20
                                       1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D 16.70
                                0.20
                                       1.00 83
                   D 0.70
                                0.20 0.10 75
 COMMERCIAL
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 30.90 SUBAREA RUNOFF(CFS) = 55.07
 EFFECTIVE AREA(ACRES) = 1377.77 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1446.80 PEAK FLOW RATE(CFS) = 2382.02
********************
```

```
FLOW PROCESS FROM NODE 3141.00 TO NODE 3142.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 620.00 DOWNSTREAM(FEET) = 590.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1040.00 CHANNEL SLOPE = 0.0288
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2382.02
 FLOW VELOCITY (FEET/SEC.) = 16.86 FLOW DEPTH (FEET) = 7.89
 TRAVEL TIME (MIN.) = 1.03 Tc (MIN.) = 32.19
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3142.00 = 18631.00 FEET.
FLOW PROCESS FROM NODE 3141.00 TO NODE 3142.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 32.19
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.137
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                 Fp
                                        Ap SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                          28.30
                                  0.30
                                         1.00
 NATURAL FAIR COVER
 "GRASS"
                    В
                          0.70
                                  0.30
                                        1.00
                                               69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    В
                          4.60
                                  0.30
                                         1.00
                                               66
 NATURAL FAIR COVER
 "WOODLAND"
                    В
                         2.80
                                  0.30
                                         1.00
                                               60
 AGRICULTURAL POOR COVER
 "FALLOW"
                    C 24.70 0.25 1.00 91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C 2.00 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) = 63.10 SUBAREA RUNOFF (CFS) = 105.52
 EFFECTIVE AREA(ACRES) = 1440.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1509.90 PEAK FLOW RATE(CFS) = 2439.11
******************
 FLOW PROCESS FROM NODE 3141.00 TO NODE 3142.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 32.19
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.137
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fo
                                       Ap SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          20.50
                                  0.25
                                         1.00 77
 NATURAL FAIR COVER
 "WOODLAND"
                    C
                          2.60 0.25
                                         1.00 73
 AGRICULTURAL POOR COVER
 "FALLOW"
                          1.80 0.20 1.00
                    D
                                               94
 NATURAL FAIR COVER
                         1.00 0.20 1.00 83
 "OPEN BRUSH"
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 25.90 SUBAREA RUNOFF(CFS) = 44.11
 EFFECTIVE AREA(ACRES) = 1466.77 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1535.80 PEAK FLOW RATE(CFS) = 2483.22
```

```
*****
 FLOW PROCESS FROM NODE 3142.00 TO NODE 3143.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 590.00 DOWNSTREAM(FEET) = 560.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1232.00 CHANNEL SLOPE = 0.0244
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2483.22
 FLOW VELOCITY (FEET/SEC.) = 16.01 FLOW DEPTH (FEET) = 8.42
 TRAVEL TIME (MIN.) = 1.28 Tc (MIN.) = 33.47
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3143.00 = 19863.00 FEET.
*****************
 FLOW PROCESS FROM NODE 3142.00 TO NODE 3143.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 33.47
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.088
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                   В
                       27.30
                                 0.30
                                        1.00 86
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         4.90
                                 0.30
                                        1.00
                   В
                                             66
 NATURAL FAIR COVER
 "WOODLAND"
                   B 2.60
                                 0.30
                                        1.00
                                              60
 AGRICULTURAL POOR COVER
 "FALLOW"
                        5.80
                                 0.25
                                       1 00 91
 NATURAL FAIR COVER
                         2.60 0.25 1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C
                       11.40 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 54.60 SUBAREA RUNOFF(CFS) = 88.76
 EFFECTIVE AREA(ACRES) = 1521.37 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1590.40
                         PEAK FLOW RATE(CFS) = 2507.65
FLOW PROCESS FROM NODE 3142.00 TO NODE 3143.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 33.47
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.088
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                       Αp
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                                 0.25
                   C
                          0.50
 "WOODLAND"
                                        1.00
                                              73
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                         1.10
                               0.20
                   D
                                        1 00 81
 AGRICULTURAL POOR COVER
 "FALLOW"
                         3.20 0.20
                   D
                                      1.00 94
 NATURAL FAIR COVER
                   D
                        32.70
                               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) = 37.50 SUBAREA RUNOFF(CFS) = 63.70
 EFFECTIVE AREA(ACRES) = 1558.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
```

```
AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
TOTAL AREA(ACRES) = 1627.90 PEAK FLOW RATE(CFS) = 2571.35
*****
 FLOW PROCESS FROM NODE 3143.00 TO NODE 3144.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 560.00 DOWNSTREAM(FEET) = 555.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 394.00 CHANNEL SLOPE = 0.0127
 CHANNEL BASE (FEET) = 15.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2571.35
 FLOW VELOCITY (FEET/SEC.) = 12.55 FLOW DEPTH (FEET) = 8.66
 TRAVEL TIME (MIN.) = 0.52 Tc (MIN.) = 33.99
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3144.00 = 20257.00 FEET.
FLOW PROCESS FROM NODE 3143.00 TO NODE 3144.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 33.99
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.068
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                         Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           28.70
                                   0.30
                                          1.00
                                                86
                    В
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           2.40
                                   0.30
                                          1.00
                                                66
 NATURAL GOOD COVER
 "MEADOWS"
                           0.30
                                  0.30
                                          1 00 58
 NATURAL FAIR COVER
 "WOODI.AND"
                           0.60 0.30
                                          1 00
 AGRICULTURAL POOR COVER
 "FALLOW"
                         1.20 0.25
                                        1.00 91
 NATURAL FAIR COVER
 "GRASS"
                    C
                          0.80 0.25 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 34.00 SUBAREA RUNOFF(CFS) = 54.20
 EFFECTIVE AREA(ACRES) = 1592.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1661.90
                           PEAK FLOW RATE(CFS) = 2597.64
FLOW PROCESS FROM NODE 3143.00 TO NODE 3144.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 33.99
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.068
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           6.00
                                   0.25
                                          1 00 77
 AGRICULTURAL POOR COVER
 "FALLOW"
                           2.90
                                   0.20
                     D
                                          1.00 94
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           6.20
                                  0.20
                                          1.00
 NATURAL GOOD COVER
 "MEADOWS"
                                 0.20 1.00 78
                     D
                           0.20
 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) = 15.30 SUBAREA RUNOFF(CFS) = 25.46 EFFECTIVE AREA(ACRES) = 1608.17 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1677.20
                            PEAK FLOW RATE (CFS) = 2623.10
FLOW PROCESS FROM NODE 3144.00 TO NODE 3145.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 555.00 DOWNSTREAM(FEET) = 540.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 504.00 CHANNEL SLOPE = 0.0298
 CHANNEL BASE (FEET) = 15.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2623.10
 FLOW VELOCITY (FEET/SEC.) = 17.21 FLOW DEPTH (FEET) = 6.95
 TRAVEL TIME (MIN.) = 0.49 Tc (MIN.) = 34.48
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3145.00 = 20761.00 FEET.
*****
 FLOW PROCESS FROM NODE 3144.00 TO NODE 3145.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
 MAINLINE Tc (MIN) = 34.48
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.050
 SUBAREA LOSS RATE DATA(AMC II):
                                  Fp
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                           Ap SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                      B
                            0.40
                                     0.30
                                             1.00
 AGRICULTURAL POOR COVER
 "FALLOW"
                                     0.30
                      В 17.20
                                            1.00
                                                   86
 NATURAL FAIR COVER
                            5.10
 "OPEN BRUSH"
                                     0.30
                                            1 00
                                                   66
 NATURAL GOOD COVER
 "MEADOWS"
                     B
                             0.30
                                     0.30
                                            1.00
                                                   5.8
 NATURAL FAIR COVER
 "WOODLAND"
                     В
                             2.00
                                     0.30
                                           1.00 60
 AGRICULTURAL POOR COVER
 "FALLOW"
                            1.30
                                   0.25 1.00 91
                     C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 26.30
                         SUBAREA RUNOFF(CFS) = 41.47
 EFFECTIVE AREA(ACRES) = 1634.47 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1703.50
                            PEAK FLOW RATE(CFS) = 2637.73
*******************
 FLOW PROCESS FROM NODE 3144.00 TO NODE 3145.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 34.48
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.050
 SUBAREA LOSS RATE DATA(AMC II):
                                  Fp
                 SCS SOIL AREA
 DEVELOPMENT TYPE/
                                             Ap
                                                  SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                            0.40
                                     0.25
                                             1.00 79
                      C
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      C
                            7.40
                                     0.25
                                             1.00
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                      D
                            47.10
                                     0.20
                                             1.00
                                                   81
 AGRICULTURAL POOR COVER
 "FALLOW"
                             5.40
                                     0.20
                                             1.00 94
```

```
NATURAL FAIR COVER
                           0.30 0.20 1.00 84
  'GRASS"
 NATURAL FAIR COVER
 "WOODLAND"
                   D
                          0.90 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) = 61.50 SUBAREA RUNOFF(CFS) = 102.03
 EFFECTIVE AREA(ACRES) = 1695.97 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.96
 TOTAL AREA (ACRES) = 1765.00 PEAK FLOW RATE (CFS) = 2739.76
*********************
 FLOW PROCESS FROM NODE 3145.00 TO NODE 3146.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 540.00 DOWNSTREAM(FEET) = 500.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1156.00 CHANNEL SLOPE = 0.0346
 CHANNEL BASE (FEET) = 15.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2739.76
 FLOW VELOCITY (FEET/SEC.) = 18.39 FLOW DEPTH (FEET) = 6.83
 TRAVEL TIME (MIN.) = 1.05 Tc (MIN.) = 35.53
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3146.00 = 21917.00 FEET.
******************
 FLOW PROCESS FROM NODE 3145.00 TO NODE 3146.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 35.53
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.014
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                                SCS
                                Fp
                                         Ap
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                           25.90
                                   0.30
                                           1.00
                                                 86
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     В
                          1.70
                                   0.30
                                          1.00
                                                 66
 NATURAL FAIR COVER
 "WOODLAND"
                           0.50
                                   0.30
                                          1.00
                     В
                                                 60
 AGRICULTURAL POOR COVER
 "FALLOW"
                          10.80
                                   0.25
                                          1.00
                                                 91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          3.50
                                   0.25
                                          1 00
                                                 75
 NATURAL FAIR COVER
                     С
 "OPEN BRUSH"
                          17.40
                                 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) = 59.80 SUBAREA RUNOFF(CFS) = 93.68
 EFFECTIVE AREA(ACRES) = 1755.77 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1824.80 PEAK FLOW RATE(CFS) = 2779.13
*****
 FLOW PROCESS FROM NODE 3145.00 TO NODE 3146.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 35.53
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.014
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fρ
                                         Ар
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                                           1.00 94
                           17.60
                                   0.20
```

```
NATURAL FAIR COVER
                           7.00 0.20 1.00 83
  "OPEN BRUSH"
                     D
 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 = 1.00
 SUBAREA AREA(ACRES) = 25.70
                         SUBAREA RUNOFF(CFS) = 41.96
 EFFECTIVE AREA(ACRES) = 1781.47 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1850.50
                         PEAK FLOW RATE (CFS) = 2821.09
********************
 FLOW PROCESS FROM NODE 3146.00 TO NODE 3147.00 IS CODE = 51
._____
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 500.00 DOWNSTREAM(FEET) = 484.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 399.00 CHANNEL SLOPE = 0.0401
 CHANNEL BASE (FEET) = 15.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2821.09
 FLOW VELOCITY (FEET/SEC.) = 19.57 FLOW DEPTH (FEET) = 6.66
 TRAVEL TIME (MIN.) = 0.34 Tc (MIN.) = 35.87
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3147.00 = 22316.00 FEET.
********************
 FLOW PROCESS FROM NODE 3146.00 TO NODE 3147.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 35.87
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.004
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                          Αp
                                                 SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FAT.LOW"
                     В
                           9.50
                                    0.30
                                           1 00
                                                 86
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     В
                          10.90
                                    0.30
                                           1.00
                                                 66
 NATURAL FAIR COVER
 "WOODLAND"
                                    0.30
                                           1.00
                     В
                           1.20
                                                 60
 AGRICULTURAL POOR COVER
 "FALLOW"
                            5.00
                                   0.25
                                           1.00
                                                 91
                     C
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            5.40
                                   0.25
                                           1.00
 NATURAL FAIR COVER
 "WOODLAND"
                     С
                            0.40
                                  0.25
                                         1.00 73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 32.40 SUBAREA RUNOFF(CFS) = 50.17
 EFFECTIVE AREA(ACRES) = 1813.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1882.90
                           PEAK FLOW RATE (CFS) = 2854.92
******************
 FLOW PROCESS FROM NODE 3146.00 TO NODE 3147.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TO (MIN) = 35.87
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.004
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                   Fρ
                                          Aр
                                                SCS
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                   D
                           10.50
                                    0.20
                                           1.00 81
```

```
AGRICULTURAL POOR COVER
                                  0.20
                                         1.00 94
 "FALLOW"
                            8.30
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      D
                           43.50 0.20 1.00
 NATURAL FAIR COVER
                      D
                            5.00 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) = 67.30 SUBAREA RUNOFF(CFS) = 109.27
 EFFECTIVE AREA(ACRES) = 1881.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1950.20 PEAK FLOW RATE(CFS) = 2964.18
*****
 FLOW PROCESS FROM NODE 3147.00 TO NODE 3148.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 484.00 DOWNSTREAM(FEET) = 460.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1058.00 CHANNEL SLOPE = 0.0227
 CHANNEL BASE (FEET) = 15.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2964.18
 FLOW VELOCITY (FEET/SEC.) = 16.11 FLOW DEPTH (FEET) = 8.00
 TRAVEL TIME (MIN.) = 1.09 Tc (MIN.) = 36.96
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3148.00 = 23374.00 FEET.
*********************
 FLOW PROCESS FROM NODE 3147.00 TO NODE 3148.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC(MIN) = 36.96
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.971
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                   Fp
                                          Аp
                                                 SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                      В
                            3.50
                                    0.30
                                            1.00
                                                  86
 NATURAL FAIR COVER
 "WOODLAND"
                                    0.30
                      В
                            1.60
                                            1.00
                                                  60
 AGRICULTURAL POOR COVER
 "FALLOW"
                            0.80
                                    0.25
                                            1.00
                                                  91
                      C
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            3.90
                                    0.25
                                            1 00
                                                  77
 NATURAL FAIR COVER
 "WOODLAND"
                            1.80
                                    0.25
                                            1.00
                                                 73
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                     D
                            0.10
                                  0.20 1.00 94
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 11.70
                         SUBAREA RUNOFF(CFS) = 17.90
 EFFECTIVE AREA(ACRES) = 1892.87 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1961.90 PEAK FLOW RATE(CFS) = 2964.18
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*********************
 FLOW PROCESS FROM NODE 3147.00 TO NODE 3148.00 IS CODE = 81
._____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC(MIN) = 36.96
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.971
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                                 SCS
                                   Fp
                                            Αp
```

LAND USE NATURAL FAIR COVER	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
"OPEN BRUSH"	D	0.60	0.20	1.00	83
NATURAL FAIR COVER					
"WOODLAND"			0.20		79
SUBAREA AVERAGE PERVIOUS				20	
SUBAREA AVERAGE PERVIOUS				. – .	E 4
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	1896 9	7 AREA-AN	RUNOFF (CFS	TNCH/HR)	= 0.25
AREA-AVERAGED Fp(INCH/HF					0.20
TOTAL AREA(ACRES) = 19					964.18
NOTE: PEAK FLOW RATE DEF	FAULTED TO	O UPSTREAM	VALUE		
******		*******	********	******	*****
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDAI					
>>>>TRAVELTIME THRU SUE	•		,		
ELEVATION DATA: UPSTREAM					
CHANNEL LENGTH THRU SUBA					
CHANNEL BASE (FEET) = 1					
MANNING'S FACTOR = 0.040	) MAXIM	UM DEPTH(F	EET) = $10.$	00	
CHANNEL FLOW THRU SUBARE				0 5 1	
FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 1.				= 8.56	
LONGEST FLOWPATH FROM NO				0 = 24511	.00 FEET.
******					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
=======================================					=========
MAINLINE Tc (MIN) = 38.2				======	
MAINLINE Tc(MIN) = 38.2 * 100 YEAR RAINFALL INTE	25 ENSITY(IN	CH/HR) = 1			
MAINLINE TC(MIN) = 38.2 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(	25 ENSITY(ING AMC II):	CH/HR) = 1	1.932		
MAINLINE TC(MIN) = 38.2 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/	25 ENSITY(ING AMC II): SCS SOIL	CH/HR) = 1	1.932 Fp	Ар	scs
MAINLINE TC(MIN) = 38.2 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/ LAND USE	ENSITY(ING AMC II): SCS SOIL GROUP	CH/HR) = 1	1.932	Ар	scs
MAINLINE TC (MIN) = 38.2 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER	ENSITY(ING AMC II): SCS SOIL GROUP	CH/HR) = 1  AREA (ACRES)	1.932 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW"	ENSITY(ING AMC II): SCS SOIL GROUP	CH/HR) = 1	1.932 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
MAINLINE TC (MIN) = 38.2 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER	ENSITY(ING ENSITY(ING AMC II): SCS SOIL GROUP B	CH/HR) = 1 AREA (ACRES) 31.10	1.932 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN 86
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER	ES ENSITY(INC AMC II): SCS SOIL GROUP B	CH/HR) = 1 AREA (ACRES) 31.10 7.00	Fp (INCH/HR) 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 86 66
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"	ES ENSITY(INC AMC II): SCS SOIL GROUP B	CH/HR) = 1 AREA (ACRES) 31.10 7.00	Fp (INCH/HR) 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 86
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER	ES ENSITY(ING MMC II): SCS SOIL GROUP B B	CH/HR) = 1 AREA (ACRES) 31.10 7.00 1.60	Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 86 66
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "MOODLAND"	ESENSITY(ING MMC II): SCS SOIL GROUP B B B	CH/HR) = 1 AREA (ACRES) 31.10 7.00 1.60	Fp (INCH/HR) 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 86 66
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"  NATURAL FAIR COVER "WOODLAND"  AGRICULTURAL POOR COVER	ESENSITY(ING MMC II): SCS SOIL GROUP B B B	AREA (ACRES)  31.10  7.00  1.60  2.50	Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00 1.00	SCS CN 86 66 72
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"  NATURAL FAIR COVER "WOODLAND"  AGRICULTURAL POOR COVER	ESENSITY(ING MMC II): SCS SOIL GROUP B B B	AREA (ACRES)  31.10  7.00  1.60  2.50	1.932 Fp (INCH/HR) 0.30 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00 1.00	SCS CN 86 66 72
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"  NATURAL FAIR COVER "WOODLAND"  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"	ESENSITY(ING MMC II): SCS SOIL GROUP  B B B C C	CH/HR) = 1 AREA (ACRES) 31.10 7.00 1.60 2.50 6.10 4.60	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.30  0.25  0.25	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 66 72 60
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS	ESENSITY(ING MMC II): SCS SOIL GROUP  B B C C C I LOSS RAM	CH/HR) = 1 AREA (ACRES) 31.10 7.00 1.60 2.50 6.10 4.60 TE, FP(INCE	1.932 Fp (INCH/HR) 0.30 0.30 0.30 0.25 0.25 H/HR) = 0.	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 66 72 60
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS	ES LOSS RA'S AREA FRE	CH/HR) = 1  AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCE ACTION, AP	Fp (INCH/HR) 0.30 0.30 0.30 0.30 0.25 0.25 H/HR) = 0.	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29	SCS CN 86 66 72 60 91
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) =	ES INSITY (INCLUDE IN INCLUDE IN	AREA (ACRES) 31.10 7.00 1.60 2.50 6.10 4.60 TE, FP(INCHACTION, APSUBAREA	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  H/HR) = 0.  = 1.00  RUNOFF (CFS	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29	SCS CN 86 66 72 60 91 77
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"  NATURAL FAIR COVER "WOODLAND"  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) =	ES LOSS RAFA FRE S2.90 1949.8	CH/HR) = 1  AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCHACTION, APSUBAREA 7 AREA-AV	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  H/HR) = 0.  = 1.00  RUNOFF (CFS VERAGED Fm (	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29  1.00  29  1.00	SCS CN 86 66 72 60 91 77
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"  NATURAL FAIR COVER "WOODLAND"  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HE	ES CONSTRAINS RAY S AREA FRI 52.90 1949.8 S 1 2.24	CH/HR) = 1  AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, Fp(INCHACTION, App SUBAREA 7 AREA-AVI 6 AREA-AVI 6 AREA-AVI	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  H/HR) = 0.  = 1.00  RUNOFF(CFS VERAGED Fm (ERAGED Ap =	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 29 ) = 78. INCH/HR) 0.97	SCS CN 86 66 72 60 91 77
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"  NATURAL FAIR COVER "WOODLAND"  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) =	ES LOSS RA'S AREA FRE 52.90 1949.8'S) = 0.2018.90	CH/HR) = 1  AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCHACTION, APSUBAREA ACTION, APSUBAREA AREA-AVA AREA-AVA PEAK FI	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  H/HR) = 0. = 1.00  RUNOFF (CFS VERAGED Fm (ERAGED AP = LOW RATE (CF	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 29 ) = 78. INCH/HR) 0.97	SCS CN 86 66 72 60 91 77
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"  NATURAL FAIR COVER "WOODLAND"  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "OPEN BRUSH"  SUBAREA AVERAGE PERVIOUS SUBAREA FALA (ACRES) = AREA-AVERAGED FP (INCH/HE TOTAL AREA (ACRES) = 20 NOTE: PEAK FLOW RATE DER	ESCUSSITY (INC. MC II): SCS SOIL GROUP  B B C C C S LOSS RA' S AREA FR' 52.90 1949.8' (1) = 0.20 1018.90 FAULTED TO	AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCHACTION, APSUBAREA 7 AREA-AVI 6 AREA-AVI 7 PEAK FI 0 UPSTREAM	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  H/HR) = 0.  = 1.00  RUNOFF (CFS VERAGED Fm (ERAGED AP = LOW RATE (CF VALUE	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29  ) = 78. INCH/HR) 0.97 S) = 2	SCS CN 86 66 72 60 91 77 20 = 0.25
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS OUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HE TOTAL AREA (ACRES) = 20 NOTE: PEAK FLOW RATE DER	ES LOSS RA'S SAREA FRE 52.90 1949.8 P. 0.2018.90 FAULTED TO	AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCHAP ACTION, APSUBAREA 7 AREA-AVE PEAK FIOUPSTREAM	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  H/HR) = 0.  = 1.00  RUNOFF (CFS VERAGED Fm (ERAGED Ap = LOW RATE (CF VALUE	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29  ) = 78. INCH/HR) 0.97 S) = 2	SCS CN 86 66 72 60 91 77 20 = 0.25
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS SUBAREA FAURAGED FP (INCH/HR TOTAL AREA (ACRES) = AREA-AVERAGED FP (INCH/HR TOTAL AREA (ACRES) = 20 NOTE: PEAK FLOW RATE DER ************************************	ES LOSS RA'S AREA FRE 52.90 1949.8'S 1949.8'S 2012.018.90 PAULTED TO TO TAX 1148.00	CH/HR) = 1  AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCHACTION, APSUBAREA AREA-AVACTION, APPEAK FIOUPSTREAM  ***********************************	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  H/HR) = 0. = 1.00  RUNOFF (CFS VERAGED Fm (ERAGED AP = LOW RATE (CF VALUE  ***********************************	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29  ) = 78. INCH/HR) 0.97 S) = 2	SCS CN 86 66 72 60 91 77 20 = 0.25
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS OUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HE TOTAL AREA (ACRES) = 20 NOTE: PEAK FLOW RATE DER	ES INSITY (INC. MC II): SCS SOIL GROUP  B B B C C C S LOSS RA: S AREA FR: 52.90 1949.8' 3148.00 PAULTED TO A TO MAIN:	CH/HR) = 1  AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCHACTION, APSUBAREA 7 AREA-ANTO PEAK FIOUPSTREAM ************************************	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  H/HR) = 0.  = 1.00  RUNOFF(CFS VERAGED Fm( ERAGED Ap = LOW RATE(CF VALUE  ***********************************	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29  ) = 78. INCH/HR) 0.97 S) = 2  **********************************	SCS CN 86 66 72 60 91 77 20 = 0.25 964.18
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS SUBAREA FAURAGE FELOMO SUBAREA FAURAGE TOTAL FOR THE FOR THE FAURAGE FELOMO SUBAREA FAURAGE TOTAL FOR THE FAURAGE FUNDAMENTAL FUNDAMENTAL FOR THE FAURAGE FUNDAMENTAL F	ES LOSS RA'S AREA FRI 52.90  1949.8 8) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) = 0.20 1949.8 7) =	CH/HR) = 1  AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCHACTION, APSUBAREA 7 AREA-AVI 6 AREA-AVI 6 AREA-AVI 7 UPSTREAM ************************************	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  H/HR) = 0. = 1.00  RUNOFF (CFS VERAGED Fm (ERAGED AP = LOW RATE (CF VALUE  ***********************************	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29  ) = 78. INCH/HR) 0.97 S) = 2  **********************************	SCS CN 86 66 72 60 91 77 20 = 0.25 964.18
MAINLINE TC (MIN) = 38.2  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS SUBAREA FAL (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HR TOTAL AREA (ACRES) = 20 NOTE: PEAK FLOW RATE DER  ***********************************	ES NSITY (INC MC II): SCS SOIL GROUP  B  B  B  C  C  SIOSS RA:  SAREA FR:  52.90  1949.8:  3148.00  PAULTED TO  ************  3148.00  A TO MAIN:	AREA (ACRES)  31.10  7.00  1.60  2.50  6.10  4.60  TE, FP(INCHACTION, AP SUBAREA 7 AREA-AVI PEAK FI O UPSTREAM ************************************	Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  H/HR) = 0.  = 1.00  RUNOFF (CFS VERAGED Fm (ERAGED AP = LOW RATE (CF VALUE  ***********************************	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  29  ) = 78. INCH/HR) 0.97 S) = 2  **********************************	SCS CN 86 66 72 60 91 77 20 = 0.25 964.18

		(ACRES)	(INCH/HR)	(DECIMAL)	CN
AGRICULTURAL POOR COVER		15.00	0.00	1 00	0.4
"FALLOW"	D	15.20	0.20	1.00	94
NATURAL FAIR COVER		01 00	0 00	1 00	0.4
"GRASS"	D	21.30	0.20	1.00	84
NATURAL FAIR COVER		41 50	0 00	1 00	0.0
"OPEN BRUSH"	D	41.50	0.20	1.00	83
NATURAL GOOD COVER	D	0 40	0.20	1 00	7.0
"MEADOWS"	D	0.40	0.20	1.00	78
NATURAL FAIR COVER		0 10	0 00	1 00	0.6
"CHAPARRAL, NARROWLEAF"	D	9.10	0.20	1.00	86
NATURAL FAIR COVER		0.00	0.20	1 00	7.0
"WOODLAND"	D TOGG DA				79
SUBAREA AVERAGE PERVIOUS				.20	
SUBAREA AVERAGE PERVIOUS				a) _ 120 E	-
SUBAREA AREA(ACRES) =					
EFFECTIVE AREA (ACRES) =					0.25
AREA-AVERAGED Fp(INCH/HF					04.70
TOTAL AREA(ACRES) = 21	08.40	PEAK I	FLOW RATE (C.	FS) = 30	84.70
******					
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDAI					
>>>>TRAVELTIME THRU SUE					
ELEVATION DATA: UPSTREAM					
CHANNEL LENGTH THRU SUBA				EL SLOPE =	0.0345
CHANNEL BASE (FEET) = 1	5.00 "	Z" FACTOR	= 1.000		
MANNING'S FACTOR = 0.040	MAXIM	UM DEPTH(	FEET) = 10	.00	
CHANNEL FLOW THRU SUBARE	A(CFS) =	3084.70	0		
FLOW VELOCITY (FEET/SEC.)				= 7.29	
$TRAVEL\ TIME\ (MIN.) = 0.$	51 Tc(	MIN.) = .	38.76		
TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO				00 = 25090.	00 FEET.
TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO				00 = 25090.	00 FEET.
	DE 310	0.00 TO NO	ODE 3150.		
LONGEST FLOWPATH FROM NO	DE 310	0.00 TO NO	ODE 3150.	*****	****
LONGEST FLOWPATH FROM NO	DE 310 ****** 3149.00	0.00 TO NO ******** TO NODE	DDE 3150. ************************************	********* S CODE = 8	*******
LONGEST FLOWPATH FROM NO  ************************** FLOW PROCESS FROM NODE	******* 3149.00	0.00 TO NO ******* TO NODE	3150.00 I	********* S CODE = 8	*******
LONGEST FLOWPATH FROM NO  ******* FLOW PROCESS FROM NODE	********* 3149.00 TO MAIN	0.00 TO NO  *******  TO NODE  LINE PEAK	3150.00 I	********* S CODE = 8	*******
LONGEST FLOWPATH FROM NO  ******************** FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBAREA	******** 3149.00 TO MAIN	0.00 TO NO  *******  TO NODE  LINE PEAK	3150.00 I	********* S CODE = 8	*******
LONGEST FLOWPATH FROM NO  *********  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 38.7	******** 3149.00 TO MAIN	0.00 TO NO ********  TO NODE LINE PEAK	3150.00 I	********* S CODE = 8	*******
LONGEST FLOWPATH FROM NO  *******************  FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 38.7  * 100 YEAR RAINFALL INTE	******** 3149.00 TO MAIN 6 RNSITY(IN	0.00 TO NO *******  TO NODE LINE PEAK CH/HR) =	3150.00 I	********* S CODE = 8	*******
LONGEST FLOWPATH FROM NO  *******************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN 6 NSITY(IN	0.00 TO NO  ********  TO NODE  LINE PEAK  = CH/HR) =	3150.00 IS FLOW<<<<< 1.917	************ S CODE = 8	********
LONGEST FLOWPATH FROM NO  *******************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN 6 NSITY(IN	0.00 TO NO  ********  TO NODE  LINE PEAK  = CH/HR) =	3150.00 IS FLOW<<<<< 1.917	************ S CODE = 8	********
LONGEST FLOWPATH FROM NO  *******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBAREA  **********************************	******** 3149.00 TO MAIN 6 NNSITY(IN MC II): SCS SOIL GROUP	0.00 TO NO  ********  TO NODE  LINE PEAK  = CH/HR) =	3150.00 IS FLOW<<<<< 1.917	************ S CODE = 8	********
LONGEST FLOWPATH FROM NO  ******************  FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 38.7  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER	******** 3149.00 TO MAIN TO MAIN HOLE 6 INSITY(IN MC II): SCS SOIL GROUP	0.00 TO NO  ********  TO NODE  LINE PEAK  ===================================	3150.00 IS  **********  3150.00 IS  FLOW<  1.917  Fp (INCH/HR)	*********** S CODE = 8 Ap (DECIMAL)	**************************************
LONGEST FLOWPATH FROM NO  *********  FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBAREA  **********************************	******** 3149.00 TO MAIN TO MAIN HOLE 6 INSITY(IN MC II): SCS SOIL GROUP	0.00 TO NO  ********  TO NODE  LINE PEAK  ===================================	3150.00 IS FLOW<<<<< 1.917	*********** S CODE = 8 Ap (DECIMAL)	**************************************
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN NOTITY (IN MC II): SCS SOIL GROUP B	0.00 TO NO  *******  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70	3150.00 II 3150.00 II FLOW<<<<  1.917 Fp (INCH/HR) 0.30	********** S CODE = 8  Ap (DECIMAL) 1.00	********* 11
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN NOTITY (IN MC II): SCS SOIL GROUP B	0.00 TO NO  *******  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70	3150.00 II 3150.00 II FLOW<<<<  1.917 Fp (INCH/HR) 0.30	********** S CODE = 8  Ap (DECIMAL) 1.00	********* 11
LONGEST FLOWPATH FROM NO  ******************  FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBAREA  **********************************	******** 3149.00 . TO MAIN	0.00 TO NO  ********  TO NODE	DDE 3150.  *********  3150.00 IS  FLOW<  1.917  Fp (INCH/HR)  0.30  0.30	**********  S CODE = 8  Ap (DECIMAL)  1.00  1.00	*********** 11
LONGEST FLOWPATH FROM NO  ********  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBAREA  ********  MAINLINE TC (MIN) = 38.7  *** 100 YEAR RAINFALL INTE  SUBAREA LOSS RATE DATA (A  DEVELOPMENT TYPE/  LAND USE  AGRICULTURAL POOR COVER  "FALLOW"  NATURAL FAIR COVER  "CHAPARRAL, BROADLEAF"  NATURAL FAIR COVER  "OPEN BRUSH"	******** 3149.00 TO MAIN TO MAIN NOTITY (IN MC II): SCS SOIL GROUP B	0.00 TO NO  ********  TO NODE	DDE 3150.  *********  3150.00 IS  FLOW<  1.917  Fp (INCH/HR)  0.30  0.30	**********  S CODE = 8  Ap (DECIMAL)  1.00  1.00	*********** 11
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN SITY(IN MC II): SCS SOIL GROUP B B B	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  20.70  0.40  2.70	3150.00 I: ********** 3150.00 I: FLOW<<<<  1.917  Fp (INCH/HR) 0.30 0.30 0.30	********** S CODE = 8  Ap (DECIMAL)  1.00  1.00  1.00	********** 11
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN STY(IN MC II): SCS SOIL GROUP B B B B	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  20.70  0.40  2.70	DDE 3150.  *********  3150.00 IS  FLOW<  1.917  Fp (INCH/HR)  0.30  0.30	********** S CODE = 8  Ap (DECIMAL)  1.00  1.00  1.00	********** 11
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN 6 NNSITY(IN MC II): SCS SOIL GROUP B B B B	0.00 TO NO  ********  TO NODE   TO NODE   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50	3150.00 IS 3150.00 IS FLOW<<<<  1.917 Fp (INCH/HR) 0.30 0.30 0.30 0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00	**************************************
LONGEST FLOWPATH FROM NO  *******************  FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBAREA  **********************************	******** 3149.00 TO MAIN 6 NNSITY(IN MC II): SCS SOIL GROUP B B B B	0.00 TO NO  ********  TO NODE   TO NODE   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50	3150.00 I: ********** 3150.00 I: FLOW<<<<  1.917  Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00	**************************************
LONGEST FLOWPATH FROM NO  *********  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN SESSOIL GROUP B B B C	0.00 TO NO  ********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20	3150.00 II ********** 3150.00 II FLOW<<<<< 1.917 Fp (INCH/HR) 0.30 0.30 0.30 0.30 0.25	Ap (DECIMAL)  1.00  1.00  1.00  1.00	**************************************
LONGEST FLOWPATH FROM NO  *******************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN SITY(IN MC II): SCS SOIL GROUP B B B C C	0.00 TO NO  ********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40	3150.00 II ********** 3150.00 II FLOW<<<<  1.917 Fp (INCH/HR) 0.30 0.30 0.30 0.30 0.25 0.25	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	**************************************
LONGEST FLOWPATH FROM NO  *********  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN SCS SOIL GROUP B B B C C C LOSS RA	0.00 TO NO  ********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, FP(ING	3150.0  *********  3150.00 II  FLOW< <<<  1.917  Fp (INCH/HR)  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	**************************************
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN IN IT IN	0.00 TO NO  *********  TO NODE   LINE PEAK   AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, FP(INMACTION, AN	DDE 3150.  *********  3150.00 I:  FLOW<<<<  1.917  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  CH/HR) = 0  p = 1.00	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  2.00  1.00  1.00  1.00  1.00  1.00	**************************************
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN SITY (IN MC II): SCS SOIL GROUP  B B B C C C LOSS RA AREA FR 56.90	0.00 TO NO  ********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, FP(IN, AR SUBAREI SUBAR	3150.00 I: ********** 3150.00 I: FLOW<<<<	Ap (DECIMAL)  1.00  1.00  1.00  1.00  27  S) = 84.1	**********  SCS CN  86  63  66  60  91  75
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN SITY (IN MC II): SCS SOIL GROUP  B B B C C LOSS RA 56.90 2096.2	0.00 TO NO  ********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, Fp(INA ACTION, AR SUBAREZ 7 AREA-2	DDE 3150.  **********  3150.00 II  FLOW<<<<  1.917  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  CH/HR) = 0  DDE 1.00  A RUNOFF (CF-AVERAGED FM	Ap (DECIMAL)  1.00  1.00  1.00  1.00  27  S) = 84.1 (INCH/HR) =	**********  SCS CN  86  63  66  60  91  75
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN SITY (IN MC II): SCS SOIL GROUP  B B B C C LOSS RA 56.90 2096.2	0.00 TO NO  ********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, Fp(INA ACTION, AR SUBAREZ 7 AREA-2	DDE 3150.  **********  3150.00 II  FLOW<<<<  1.917  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  CH/HR) = 0  DDE 1.00  A RUNOFF (CF-AVERAGED FM	Ap (DECIMAL)  1.00  1.00  1.00  1.00  27  S) = 84.1 (INCH/HR) =	**********  SCS CN  86  63  66  60  91  75
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN STRY(IN MC II): SCS SOIL GROUP B B C C LOSS RA AREA FR 56.90 2096.2	0.00 TO NO  ********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, Fp(INC ACTION, AF SUBAREZ, 7 AREA-16 AREA-AV 6 AREA-AV	3150.00 II ********** 3150.00 II FLOW<<<<  1.917  Fp (INCH/HR) 0.30 0.30 0.30 0.25 0.25 CH/HR) = 0 p = 1.00 A RUNOFF(CFAVERAGED FM VERAGED AP	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	***********  SCS CN  86  63  66  60  91  75
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	******** 3149.00 TO MAIN TO MAIN STRY(IN MC II): SCS SOIL GROUP B B C C LOSS RA AREA FR 56.90 2096.2	0.00 TO NO  ********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, Fp(INC ACTION, AF SUBAREZ, 7 AREA-16 AREA-AV 6 AREA-AV	3150.00 II ********** 3150.00 II FLOW<<<<  1.917  Fp (INCH/HR) 0.30 0.30 0.30 0.25 0.25 CH/HR) = 0 p = 1.00 A RUNOFF(CFAVERAGED FM VERAGED AP	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	***********  SCS CN  86  63  66  60  91  75
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	********* 3149.00 TO MAIN TO MAIN CII): SCS SOIL GROUP  B B C C C LOSS RA AREA FR 56.90 2096.2 0: 0.265.30	0.00 TO NO  ********  TO NODE  LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, Fp(ING ACTION, AR SUBAREJ 7 AREA-1 6 AREA-AN PEAK I	DDE 3150.  **********  3150.00 I:  FLOW<<<<<	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	**************************************
LONGEST FLOWPATH FROM NO  ********************  FLOW PROCESS FROM NODE	********  *******  3149.00  TO MAIN  TO MAIN  INSITY (IN  MC II):  SCS SOIL  GROUP  B  B  C  C  LOSS RA  AREA FR  56.90  2096.2  0 - 0.2  65.30  ********	0.00 TO NO  *********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, FP(INN, AR SUBAREI 7 AREA-1 6 AREA-AT PEAK I	DDE 3150.  **********  3150.00 I:  FLOW<<<<<	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	***********  SCS CN  86  63  66  60  91  75  9  0.25  40.90  **********************************
LONGEST FLOWPATH FROM NO  ***********************************	******** 3149.00  ******** 3149.00  TO MAIN  TO MAIN  SCS SOIL  GROUP  B  B  B  C  C  LASS RA  56.90  2096.2  65.30  ******* 3149.00	0.00 TO NO  *********  TO NODE   LINE PEAK   CH/HR) =  AREA (ACRES)  20.70  0.40  2.70  2.50  17.20  13.40  TE, Fp(INA ACTION, Ag SUBAREZ 7 AREA-2 6 AREA-AY PEAK I  **********  TO NODE	3150.00 II  ************  3150.00 II  FLOW<<<<  1.917  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  CH/HR) = 0 0.25  CH/HR) = 0 0.25  CH/HR) = 1.00  A RUNOFF (CF. AVERAGED FM VERAGED FM VERAGED AP  ***********  3150.00 II	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	**********  SCS CN  86  63  66  60  91  75  9  0.25  40.90  **********************************

>>>>ADDITION OF SUBAREA	TO MAIN	LINE PEAK	FLOW<		
MATNI THE (MIN) 20.7			=======		========
MAINLINE Tc(MIN) = 38.7 * 100 YEAR RAINFALL INTE		CH/HR) =	1 917		
SUBAREA LOSS RATE DATA(A	MC II):				
DEVELOPMENT TYPE/ LAND USE	SCS SOIL	AREA	Fp	Ap	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
NATURAL FAIR COVER "GRASS"	С	5 30	0.25	1 00	7.0
NATURAL FAIR COVER	C	3.30	0.23	1.00	19
"OPEN BRUSH"	С	96.30	0.25	1.00	77
NATURAL FAIR COVER					
"WOODLAND"		5.30	0.25	1.00	73
AGRICULTURAL POOR COVER "FALLOW"	D	0.70	0.20	1.00	9.4
NATURAL FAIR COVER	Б	0.70	0.20	1.00	24
"CHAPARRAL, BROADLEAF"	D	1.30	0.20	1.00	81
NATURAL FAIR COVER					
"GRASS"	D TOGG DAG		0.20		84
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS				.25	
SUBAREA AREA(ACRES) = 1	17.40	SUBARE	A RUNOFF (CFS	3) = 176.	63
EFFECTIVE AREA(ACRES) =	2213.6	7 AREA-	AVERAGED Fm	(INCH/HR)	= 0.25
AREA-AVERAGED Fp(INCH/HR					
TOTAL AREA(ACRES) = 22	82.70	PEAK	FLOW RATE (CI	(S) = 3	317.53
*****	*****	******	*****	*****	****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
MAINLINE Tc (MIN) = 38.7			========	======	=======
* 100 YEAR RAINFALL INTE		~U/UD\ —	1 017		
SUBAREA LOSS RATE DATA(A			1.517		
DEVELOPMENT TYPE/	SCS SOIL	AREA	Fρ	Ap	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
NATURAL FAIR COVER					
"OPEN BRUSH"	D	6.70	0.20	1.00	83
NATURAL FAIR COVER					
"WOODLAND"			0.20		79
SUBAREA AVERAGE PERVIOUS				.20	
SUBAREA AVERAGE PERVIOUS SUBAREA AREA(ACRES) =				2) - 10	0.2
EFFECTIVE AREA(ACRES) =					
AREA-AVERAGED Fp(INCH/HR					0.20
TOTAL AREA(ACRES) = 22					328.35
***********************					
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDAL					
>>>>TRAVELTIME THRU SUB					
ELEVATION DATA: UPSTREAM					
CHANNEL LENGTH THRU SUBA CHANNEL BASE (FEET) = 1	REA(FEET)	) = 1410	.00 CHANNE	EL SLOPE =	0.0142
MANNING'S FACTOR = 0.040	3.UU "2	IM DEDTH /	= 1.000 FFFT) - 10	00	
CHANNEL FLOW THRU SUBARE				.00	
FLOW VELOCITY (FEET/SEC.)				= 9.65	
TRAVEL TIME (MIN.) = 1.					
LONGEST FLOWPATH FROM NO				00 = 26500	.00 FEET.
***********************					
FLOW PROCESS FROM NODE	3130.00	TO NODE	3151.00 IS	CODE =	D1
>>>>ADDITION OF SUBAREA					

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MAINLINE Tc (MIN) = 40.44
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.870
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                         αp
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
                          19.60
                                   0.30
                                         1.00
 NATURAL GOOD COVER
 "MEADOWS"
                     В
                         0.20 0.30
                                         1.00 58
 NATURAL FAIR COVER
 "WOODLAND"
                     В
                         3.30 0.30
                                         1.00
                                                 60
 AGRICULTURAL POOR COVER
 "FALLOW"
                          18.00
                                 0.25
                                          1.00 91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C
                         2.60 0.25 1.00 75
 NATURAL FAIR COVER
                     С
                         2.10 0.25 1.00 79
 "GRASS"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 45.80 SUBAREA RUNOFF(CFS) = 65.73
 EFFECTIVE AREA(ACRES) = 2266.47 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 2335.50 PEAK FLOW RATE (CFS) = 3328.35
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
FLOW PROCESS FROM NODE 3150.00 TO NODE 3151.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 40.44
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.870
 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"
                          40.10
                                 0.25
                                         1.00 77
 NATURAL FAIR COVER
 "WOODLAND"
                   С
                         6.10 0.25 1.00 73
 NATURAL FAIR COVER
                     D 1.20 0.20
 "GRASS"
                                        1.00
                                                84
 NATURAL FAIR COVER
                   D 3.30 0.20 1.00 83
 "OPEN BRUSH"
 NATURAL FAIR COVER
 "MOODT.AND"
                    D
                           0.10
                                 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 50.80 SUBAREA RUNOFF(CFS) = 74.27
 EFFECTIVE AREA(ACRES) = 2317.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 2386.30 PEAK FLOW RATE(CFS) = 3373.83
FLOW PROCESS FROM NODE 3151.00 TO NODE 3152.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 400.00 DOWNSTREAM(FEET) = 398.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 191.00 CHANNEL SLOPE = 0.0105
 CHANNEL BASE (FEET) = 20.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3373.83
 FLOW VELOCITY (FEET/SEC.) = 12.39 FLOW DEPTH (FEET) = 9.30
 TRAVEL TIME (MIN.) = 0.26 Tc (MIN.) = 40.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3152.00 = 26691.00 FEET.
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FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAR					
MAINLINE Tc (MIN) = 40	0.70				
* 100 YEAR RAINFALL IN			1.864		
SUBAREA LOSS RATE DATA				3	000
DEVELOPMENT TYPE/	SCS SUIL	AREA	rp	Ap	
LAND USE		(ACRES)	(INCH/HK)	(DECIMAL)	CN
AGRICULTURAL POOR COVE "FALLOW"		17 20	0.30	1 00	0.6
	ь	17.20	0.30	1.00	00
NATURAL FAIR COVER "OPEN BRUSH"	B	1 60	0.30	1 00	66
NATURAL FAIR COVER	ь	1.00	0.30	1.00	00
"WOODLAND"	В	1.80	0.30	1.00	60
AGRICULTURAL POOR COVE					
"FALLOW"	С	16.70	0.25	1.00	91
NATURAL FAIR COVER					
"CHAPARRAL, BROADLEAF"	С	6.70	0.25	1.00	75
NATURAL FAIR COVER					
"OPEN BRUSH"	C	32.50	0.25	1.00	77
SUBAREA AVERAGE PERVIO	OUS LOSS RA	TE, Fp(IN	CH/HR) = 0	.26	
SUBAREA AVERAGE PERVIO	OUS AREA FR	ACTION, A	p = 1.00		
SUBAREA AREA(ACRES) =	76.50	SUBARE.	A RUNOFF(CF	s) = 110.	20
EFFECTIVE AREA (ACRES)	= 2393.7	7 AREA-	AVERAGED Fm	(INCH/HR)	= 0.25
AREA-AVERAGED Fp (INCH)	/HR) = 0.2	6 AREA-A	VERAGED Ap	= 0.97	
TOTAL AREA (ACRES) =	2462.80	PEAK	FLOW RATE (C	FS) = 3	471.70
>>>>COMPUTE TRAPEZOII >>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE	DAL CHANNEL SUBAREA (EX ======= EAM(FEET) =	FLOW<<<< ISTING EL 398.0	EMENT) <<<< ======== 0 DOWNSTRE	======= AM(FEET) =	======================================
>>>>COMPUTE TRAPEZOII >>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SC CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0	DAL CHANNEL SUBAREA (EX ========= EAM (FEET) = UBAREA (FEET 20.00 " 040 MAXIM	FLOW<><< ISTING EL ====================================	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========== 0</pre>	======= AM(FEET) = EL SLOPE =	======================================
>>>>COMPUTE TRAPEZOII >>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU S CHANNEL BASE (FEET) =	DAL CHANNEL SUBAREA (EX ========= EAM (FEET) = UBAREA (FEET 20.00 " 040 MAXIM AREA (CFS) =	FLOW<<<< ISTING EL ======= 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========== 0 DOWNSTRE .00 CHANN = 1.000 FEET) = 10 0</pre>	======= AM(FEET) = EL SLOPE =	======================================
>>>>COMPUTE TRAPEZOII >>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SC CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBA	DAL CHANNEL SUBAREA (EX EXEMPTE EAM (FEET) = UBAREA (FEET 20.00 " 040 MAXIM AREA (CFS) = C.) = 11.6	FLOW<<< ISTING EL ======= 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========= 0 DOWNSTRE .00 CHANN = 1.000 FEET) = 10 0 DEPTH (FEET)</pre>	======= AM(FEET) = EL SLOPE =	======================================
>>>>COMPUTE TRAPEZOII >>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SC CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBA FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) =	DAL CHANNEL SUBAREA (EX EAM (FEET) = UBAREA (FEET 20.00 "040 MAXIM AREA (CFS) = C.) = 11.6	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) =	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========= 0 DOWNSTRE .00 CHANN = 1.000 FEET) = 10 0 DEPTH (FEET) 41.03</pre>	AM(FEET) = EL SLOPE = .00	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SU CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBJ FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM	DAL CHANNEL SUBAREA (EX EXAM (FEET) = UBAREA (FEET 20.00 "040 MAXIM AREA (CFS) = C.) = 11.6 0.33 Tc (10 NODE 310	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922	396.00 0.0087
>>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SI CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBJE FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM	DAL CHANNEL SUBAREA (EX ===================================	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 FLOW MIN.) = 0.00 TO N	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU S CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.( CHANNEL FLOW THRU SUB/ FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM  ***********************************	DAL CHANNEL SUBAREA (EX EXM (FEET) = UBAREA (FEET) = 20.00 " 040 MAXIM AREA (CFS) = 11.6 0.33 Tc (COMBO 100 MAXIM NODE 310 ***********************************	FLOW<<<< ISTING EL 398.0 () = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========0 0 DOWNSTRE .000 CHANN = 1.000 FEET) = 10 0 DEPTH (FEET) 41.03 ODE 3153. ************ 3153.00 I</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ************ S CODE =	396.00 0.0087 .00 FEET.
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ===================================	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ********* TO NODE LINE PEAK	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========= 0</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ************* S CODE =	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SI CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBS FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM  ***********************************	DAL CHANNEL SUBAREA (EX ===================================	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ********* TO NODE LINE PEAK	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========= 0</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ************* S CODE =	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SI CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBJE FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM  ***********************************	DAL CHANNEL SUBAREA (EX ===================================	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ********* TO NODE LINE PEAK	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========= 0</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ************* S CODE =	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SI CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBA FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM  ***********************************	DAL CHANNEL SUBAREA (EX EAM (FEET) = UBAREA (FEET 20.00 "040 MAXIM AREA (CFS) = C.) = 11.6 (NODE 310 ***********************************	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ******** ********* *****************	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0    DOWNSTRE .00    CHANN =   1.000 FEET) = 10 0 DEPTH (FEET) 41.03 ODE   3153.  ********** 3153.00 I FLOW&lt;&lt;&lt;&lt;&lt;================================</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ************* S CODE =	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SI CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBA FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM  ***********************************	DAL CHANNEL SUBAREA (EX EAM (FEET) = UBAREA (FEET 20.00 "040 MAXIM AREA (CFS) = C.) = 11.6 (NODE 310 ***********************************	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ******** ********* *****************	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0    DOWNSTRE .00    CHANN =   1.000 FEET) = 10 0 DEPTH (FEET) 41.03 ODE   3153.  ********** 3153.00 I FLOW&lt;&lt;&lt;&lt;&lt;================================</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ************* S CODE =	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SI CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBJE FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM  ***********************************	DAL CHANNEL SUBAREA (EX EXAM (FEET) = UBAREA (FEET 20.00 "040 MAXIM AREA (CFS) = 11.6 0.33 Tc (3 NODE 310 "10.00"	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ******** ********* *****************	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0    DOWNSTRE .00    CHANN =   1.000 FEET) = 10 0 DEPTH (FEET) 41.03 ODE   3153.  ********** 3153.00 I FLOW&lt;&lt;&lt;&lt;&lt;================================</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ************* S CODE =	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< iISTING EL 398.0 ) = 231 Z" FACTOR (MIN.) = 0.00 TO N.************************************	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	Ap (DECIMAL)	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< iISTING EL 398.0 ) = 231 Z" FACTOR (MIN.) = 0.00 TO N.************************************	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	Ap (DECIMAL)	396.00 0.0087
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SIC CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBA FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM  ******************************* FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBAR MAINLINE TC (MIN) = 41 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVE "FALLOW" NATURAL FAIR COVER	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ************************************	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ********** S CODE =	396.00 0.0087 .00 FEET. ***********************************
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ************************************	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	AM(FEET) = EL SLOPE = .00 = 9.95 00 = 26922 ********** S CODE =	396.00 0.0087 .00 FEET. ***********************************
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< ISTING EL	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========= 0</pre>	Ap (DECIMAL)  1.00	396.00 0.0087 .00 FEET. ***********************************
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< ISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH( 3471.7 6 FLOW MIN.) = 0.00 TO N ************************************	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	Ap (DECIMAL)  1.00	396.00 0.0087 .00 FEET. ***********************************
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< iISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH (	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	Ap (DECIMAL)  1.00  1.00	396.00 0.0087 .00 FEET. ***********************************
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ELEVATION DATA: UPSTRE CHANNEL LENGTH THRU SI CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.0 CHANNEL FLOW THRU SUBJE FLOW VELOCITY (FEET/SEC TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM  ******************************* FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBAR MAINLINE TC (MIN) = 41 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATZ DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVE "FALLOW" NATURAL FAIR COVER "WOODLAND" AGRICULTURAL POOR COVE "FALLOW" NATURAL FAIR COVER "FALLOW" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< ISTING EL	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ======== 0</pre>	Ap (DECIMAL)  1.00	396.00 0.0087 .00 FEET. ***********************************
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< iISTING EL	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========= 0</pre>	Ap (DECIMAL)  1.00  Ap (DECIMAL)  1.00  1.00	396.00 0.0087 .00 FEET. ***********************************
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< iISTING EL 398.0 ) = 231 Z" FACTOR UM DEPTH (	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt; ========= 0</pre>	Ap (DECIMAL)  1.00  Ap (1.00  Ap (1.00  1.00  1.00	396.00 0.0087 .00 FEET. ***********************************
>>>>COMPUTE TRAPEZOII >>>>>TRAVELTIME THRU S ====================================	DAL CHANNEL SUBAREA (EX ====================================	FLOW<<<< iISTING EL	<pre>&lt; EMENT) &lt;&lt;&lt;&lt;&lt;========= 0</pre>	Ap (DECIMAL)  1.00  1.00  1.00	396.00 0.0087 .00 FEET. ***********************************

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SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 71.60 SUBAREA RUNOFF(CFS) = 103.33
 EFFECTIVE AREA(ACRES) = 2465.37 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 2534.40 PEAK FLOW RATE (CFS) = 3558.66
*****
 FLOW PROCESS FROM NODE 3152.00 TO NODE 3153.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 41.03
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.856
 SUBAREA LOSS RATE DATA(AMC II):
                                      Аp
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                Fp
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND"
                          0 40
                                  0.25
                                         1.00 73
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                          8.00 0.20
                                       1.00 94
 NATURAL FAIR COVER
 "OPEN BRUSH"
                        1.70 0.20 1.00 83
 NATURAL FAIR COVER
 "WOODLAND"
                   D
                        0.40 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) = 10.50 SUBAREA RUNOFF(CFS) = 15.63
 EFFECTIVE AREA(ACRES) = 2475.87 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 2544.90
                        PEAK FLOW RATE (CFS) = 3574.30
*****************
 FLOW PROCESS FROM NODE 3153.00 TO NODE 3154.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
ELEVATION DATA: UPSTREAM(FEET) = 396.00 DOWNSTREAM(FEET) = 385.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 894.00 CHANNEL SLOPE = 0.0123
 CHANNEL BASE (FEET) = 20.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3574.30
 FLOW VELOCITY (FEET/SEC.) = 13.34 FLOW DEPTH (FEET) = 9.18
 TRAVEL TIME (MIN.) = 1.12 Tc (MIN.) = 42.14
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3154.00 = 27816.00 FEET.
*****
 FLOW PROCESS FROM NODE 3153.00 TO NODE 3154.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 42.14
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.831
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                       Ap
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
                                 0.30
 "FALLOW"
                    В
                         17.20
                                        1.00 86
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    B
                         0.40
                                0.30
                                        1.00
                                               66
 NATURAL FAIR COVER
 "WOODLAND"
                          1.40
                                 0.30
                                         1.00
                                               60
 AGRICULTURAL POOR COVER
 "FALLOW"
                          2.40
                                 0.25
                                         1.00
                                               91
 NATURAL FAIR COVER
                                0.25
                                       1.00 77
 "OPEN BRUSH"
                          2.00
 AGRICULTURAL POOR COVER
```

```
"FALLOW"
                     D
                             9.00
                                   0.20
                                            1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 32.40 SUBAREA RUNOFF(CFS) = 45.64
 EFFECTIVE AREA(ACRES) = 2508.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 2577.30
                            PEAK FLOW RATE(CFS) = 3574.30
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
 FLOW PROCESS FROM NODE 3153.00 TO NODE 3154.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 42.14
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.831
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODT,AND"
                     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) = 0.15
 EFFECTIVE AREA(ACRES) = 2508.37 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 2577.40 PEAK FLOW RATE (CFS) = 3574.30
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 3154.00 TO NODE 3155.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <><<
ELEVATION DATA: UPSTREAM(FEET) = 385.00 DOWNSTREAM(FEET) = 380.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 712.00 CHANNEL SLOPE = 0.0070
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3574.30
 FLOW VELOCITY (FEET/SEC.) = 10.72 FLOW DEPTH (FEET) = 9.63
 TRAVEL TIME (MIN.) = 1.11 Tc (MIN.) = 43.25
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3155.00 = 28528.00 FEET.
FLOW PROCESS FROM NODE 3154.00 TO NODE 3155.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 43.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.805
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                   Fp
                                           Ap
    LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                            30.70
                                    0.30
                                            1.00
                                                  86
 NATURAL FAIR COVER
 "GRASS"
                      В
                            0.40
                                    0.30
                                            1.00
                                                  69
 NATURAL FAIR COVER
                                            1.00
 "OPEN BRUSH"
                      B
                            4 90
                                    0.30
                                                  66
 AGRICULTURAL FAIR COVER
                            14.20
 "PASTURE, DRYLAND"
                                    0.30
                                            1.00
                                                  69
 NATURAL FAIR COVER
 "WOODLAND"
                            2.20
                                    0.30
                                            1.00
 AGRICULTURAL POOR COVER
                            24.50
                                    0.25
                                            1.00 91
 "FAT.LOW"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
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SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 76.90 SUBAREA RUNOFF(CFS) = 105.28
 EFFECTIVE AREA(ACRES) = 2585.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 2654.30 PEAK FLOW RATE (CFS) = 3610.63
*****
FLOW PROCESS FROM NODE 3154.00 TO NODE 3155.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 43.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.805
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                 Fp
                                        Ap
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           4 70
                                  0.25
                                          1.00
 NATURAL POOR COVER
 "BARREN"
                           4 60
                                  0.25
                                          1.00
                                                91
 NATURAL FAIR COVER
 "GRASS"
                          18.80
                                  0.25
                                          1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          77.90
                                  0.25
                                          1.00
                                              77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          17.20
                                  0.25
                                         1.00 79
 NATURAL FAIR COVER
 "WOODLAND"
                    С
                                0.25 1.00 73
                          1.30
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 124.50
                        SUBAREA RUNOFF(CFS) = 174.26
 EFFECTIVE AREA(ACRES) = 2709.77 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 2778.80
                           PEAK FLOW RATE (CFS) = 3784.90
*******************
 FLOW PROCESS FROM NODE 3154.00 TO NODE 3155.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 43.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.805
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                          Ap
                                               SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                           8.20
                                  0.20
                                          1.00
                                                94
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           1.50
                                  0.20
                                          1.00
                                                8.3
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          15.70
                    D
                                0.20
                                         1.00
                                                84
 NATURAL FAIR COVER
                    D
                           0.60
                                0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 26.00 SUBAREA RUNOFF(CFS) = 37.56
 EFFECTIVE AREA(ACRES) = 2735.77 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 2804.80 PEAK FLOW RATE(CFS) = 3822.46
*****
 FLOW PROCESS FROM NODE 3155.00 TO NODE 3156.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 380.00 DOWNSTREAM(FEET) = 360.00
```

```
CHANNEL LENGTH THRU SUBAREA(FEET) = 424.00 CHANNEL SLOPE = 0.0472 CHANNEL BASE(FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3822.46
 FLOW VELOCITY (FEET/SEC.) = 21.39 FLOW DEPTH (FEET) = 5.80
 TRAVEL TIME (MIN.) = 0.33 Tc (MIN.) = 43.58
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3156.00 = 28952.00 FEET.
********************
 FLOW PROCESS FROM NODE 3155.00 TO NODE 3156.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 43.58
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.798
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                   Fp
                                          Ap
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                           15.40
                                    0.30
                                           1 00 86
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           2.20
                                  0.30
                                           1.00
                                                 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     B 11.60
                                    0.30
                                           1.00
                                                  69
 AGRICULTURAL POOR COVER
 "FALLOW"
                           3.60
                                    0.25
                                           1.00
                                                 91
 NATURAL FAIR COVER
 "GRASS"
                           0.70
                                                 79
                     C
                                  0.25
                                          1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                           1.90
                                  0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 35.40 SUBAREA RUNOFF(CFS) = 47.99
 EFFECTIVE AREA(ACRES) = 2771.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 2840.20 PEAK FLOW RATE(CFS) = 3851.74
*******************
 FLOW PROCESS FROM NODE 3155.00 TO NODE 3156.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 43.58
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.798
 SUBAREA LOSS RATE DATA (AMC II):
                                          Ap SCS
  DEVELOPMENT TYPE/ SCS SOIL AREA Fp
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                                                  79
                           0.90
                                    0.25
                                            1.00
 AGRICULTURAL POOR COVER
 "FALLOW"
                          12.50
                                    0.20
                     D
                                           1.00
                                                  94
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           1.60 0.20
                                           1.00
                                                 83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     D 10.90 0.20
                                         1.00 84
 NATURAL FAIR COVER
 "WOODT.AND"
                     D
                           0.60
                                  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) = 26.50 SUBAREA RUNOFF(CFS) = 38.06
 EFFECTIVE AREA(ACRES) = 2797.67 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 2866.70 PEAK FLOW RATE(CFS) = 3889.81
 FLOW PROCESS FROM NODE 3156.00 TO NODE 3157.00 IS CODE = 51
______
```

```
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 360.00 DOWNSTREAM(FEET) = 352.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 647.00 CHANNEL SLOPE = 0.0124
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3889.81
 FLOW VELOCITY (FEET/SEC.) = 13.44 FLOW DEPTH (FEET) = 8.61
 TRAVEL TIME (MIN.) = 0.80 Tc (MIN.) = 44.38
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3157.00 = 29599.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3156.00 TO NODE 3157.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 44.38
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.779
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                        Ap
                                 Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                           7.70
                                  0.30
                                          1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          1.10
                                  0.30
                                         1.00
                                                66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                  В
                          11.30
                                  0.30
                                         1.00
                                                69
 NATURAL FAIR COVER
 "WOODLAND"
                    В
                           0.70
                                  0.30
                                          1.00
                                                60
 AGRICULTURAL POOR COVER
 "FALLOW"
                           0.20
                                  0.25
                                          1.00
 NATURAL FAIR COVER
                   С
                                0.25 1.00 77
 "OPEN BRUSH"
                         0.20
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 21.20 SUBAREA RUNOFF(CFS) = 28.24
 EFFECTIVE AREA(ACRES) = 2818.87 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 2887.90 PEAK FLOW RATE (CFS) = 3889.81
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 3156.00 TO NODE 3157.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 44.38
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.779
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                        Аp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           4.10
                                  0.20
                                          1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          10.60 0.20
                                         1.00
                                                83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D
                          28.50 0.20
                                        1.00
                                                84
 NATURAL FAIR COVER
 "WOODLAND"
                    D
                          0.60
                                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) = 43.80 SUBAREA RUNOFF(CFS) = 62.25
 EFFECTIVE AREA(ACRES) = 2862.67 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 2931.70 PEAK FLOW RATE(CFS) = 3933.83
______
```

END OF STUDY SUMMARY:

TOTAL AREA (ACRES) = 2931.70 TC (MIN.) = 44.38

EFFECTIVE AREA (ACRES) = 2862.67 AREA-AVERAGED Fm (INCH/HR) = 0.25

AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98

PEAK FLOW RATE (CFS) = 3933.83

\*\* PEAK FLOW RATE TABLE \*\*

STREAM Q TC Intensity Fp (Fm) Ap Ae HEADWATER

NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE

1 3933.83 44.38 1.779 0.26 (0.25) 0.98 2862.7 3120.00

2 3677.66 50.26 1.646 0.26 (0.25) 0.98 2931.7 3100.00

```
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.
                     430 Exchange, Suite 200
                     Irvine, CA. 92602-1309
                        714 - 734 - 5100
******************* DESCRIPTION OF STUDY ********************
* AREA 08 (EXISTING CONDITION)
* 100-YEAR HIGH CONFIDENCE STORM EVENT
* CHIOUITTA
-----
 FILE NAME: CE08100H.DAT
 TIME/DATE OF STUDY: 14:37 03/31/2004
_____
 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 0.0312 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 EOUAL 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)
                               0.020
       VALLEY (DEVELOPED)
                                   0 140
       FOOTHILL.
                                   0.620
       MOUNTAIN
       VALLEY (UNDEVELOPED) / DESERT
                                   0.220
       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
                    5.63
 *ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*
```

```
-----
 FLOW PROCESS FROM NODE 800.00 TO NODE 801.00 IS CODE = 21
 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
_____
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 326.00
 ELEVATION DATA: UPSTREAM(FEET) = 513.00 DOWNSTREAM(FEET) = 445.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.778
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.213
 SUBAREA To AND LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP
                                        Ap SCS Tc
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
    LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C
                         0.10 0.25 1.00 79
                                                   9 78
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 0.20 0.20 1.00 84
                                                   9 78
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF(CFS) = 1.08
 TOTAL AREA(ACRES) = 0.30 PEAK FLOW RATE(CFS) = 1.08
 FLOW PROCESS FROM NODE 801.00 TO NODE 802.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 445.00 DOWNSTREAM(FEET) = 400.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 194.00 CHANNEL SLOPE = 0.2320
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1.08
 FLOW VELOCITY (FEET/SEC.) = 4.89 FLOW DEPTH (FEET) = 0.19
 TRAVEL TIME (MIN.) = 0.66 Tc (MIN.) = 10.44
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 802.00 = 520.00 FEET.
*******************
FLOW PROCESS FROM NODE 801.00 TO NODE 802.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
______
MAINLINE Tc (MIN) = 10.44
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.072
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C 0.10 0.25 1.00 79
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 0.10 0.20 1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 0.20 SUBAREA RUNOFF(CFS) = 0.69
 EFFECTIVE AREA(ACRES) = 0.50 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 0.50 PEAK FLOW RATE(CFS) =
*******************
 FLOW PROCESS FROM NODE 802.00 TO NODE 803.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <
______
```

```
ELEVATION DATA: UPSTREAM(FEET) = 400.00 DOWNSTREAM(FEET) = 395.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 10.00 CHANNEL SLOPE = 0.5000
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1.73
 FLOW VELOCITY (FEET/SEC.) = 7.42 FLOW DEPTH (FEET) = 0.20
 TRAVEL TIME (MIN.) = 0.02 Tc (MIN.) = 10.46

LONGEST FLOWPATH FROM NODE 800.00 TO NODE 803.00 = 530.00 FEET.
************
 FLOW PROCESS FROM NODE 802.00 TO NODE 803.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 10.46
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.068
 SUBAREA LOSS RATE DATA(AMC II):
                                       Ap SCS
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
                         0.50 0.25 1.00 79
 "PASTURE, DRYLAND" C
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" 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) = 3.81
 EFFECTIVE AREA(ACRES) = 1.60 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 1.60 PEAK FLOW RATE (CFS) = 5.54
*******************
 FLOW PROCESS FROM NODE 803.00 TO NODE 804.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 395.00 DOWNSTREAM(FEET) = 390.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 94.00 CHANNEL SLOPE = 0.0532
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 5.54
 FLOW VELOCITY (FEET/SEC.) = 4.66 FLOW DEPTH (FEET) = 0.70
 TRAVEL TIME (MIN.) = 0.34 Tc (MIN.) = 10.80
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 804.00 = 624.00 FEET.
FLOW PROCESS FROM NODE 803.00 TO NODE 804.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE To (MIN) = 10.80
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.001
 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
                         0.20 0.25 1.00 79
 "PASTURE, DRYLAND" C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 0.20 SUBAREA RUNOFF(CFS) = 0.68
 EFFECTIVE AREA(ACRES) = 1.80 AREA-AVERAGED Fm(INCH/HR) = 0.23
 AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 1.80 PEAK FLOW RATE(CFS) = 6.12
 FLOW PROCESS FROM NODE 804.00 TO NODE 805.00 IS CODE = 51
______
```

```
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <
______
 ELEVATION DATA: UPSTREAM(FEET) = 390.00 DOWNSTREAM(FEET) = 385.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 30.00 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) = 6.12
 FLOW VELOCITY (FEET/SEC.) = 7.27 FLOW DEPTH (FEET) = 0.54
 TRAVEL TIME (MIN.) = 0.07 Tc (MIN.) = 10.87
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 805.00 = 654.00 FEET.
FLOW PROCESS FROM NODE 804.00 TO NODE 805.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 10.87
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.987
 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
                         0.90 0.25 1.00 79
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 1.10 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) = 2.00 SUBAREA RUNOFF(CFS) = 6.78
 EFFECTIVE AREA(ACRES) = 3.80 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 3.80 PEAK FLOW RATE(CFS) = 12.87
*******************
FLOW PROCESS FROM NODE 805.00 TO NODE 806.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 385.00 DOWNSTREAM(FEET) = 350.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 388.00 CHANNEL SLOPE = 0.0902
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                          12.87
 FLOW VELOCITY (FEET/SEC.) = 7.02 FLOW DEPTH (FEET) = 0.94
 TRAVEL TIME (MIN.) = 0.92 Tc (MIN.) = 11.79
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 806.00 = 1042.00 FEET.
*******************
FI.OW PROCESS FROM NODE 805.00 TO NODE 806.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 11.79
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.803
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C 2.40 0.25 1.00 79
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 1.40 0.20 1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 3.80 SUBAREA RUNOFF(CFS) = 12.21
 EFFECTIVE AREA(ACRES) = 7.60 AREA-AVERAGED Fm(INCH/HR) = 0.23
 AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
```

TOTAL AREA(ACRES) =	7.60	PEAK FI	LOW RATE (C)	FS) =	24.45
******	*****	*****	*****	*****	*****
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDAL >>>>TRAVELTIME THRU SUB	AREA (EXI	STING ELEM	MENT) <<<<		
ELEVATION DATA: UPSTREAM CHANNEL LENGTH THRU SUBA CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE. FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 1. LONGEST FLOWPATH FROM NO	(FEET) = REA (FEET) 2.00 "Z	350.00 = 815.0 " FACTOR = M DEPTH (FF 24.45 FLOW DE	DOWNSTREAD  CHANNI  1.000  EET) = 2  EPTH (FEET)  3.49	AM(FEET) = EL SLOPE = .00 = 1.02	280.00 0.0859
**************************************	806.00	TO NODE	807.00 I	S CODE =	81
>>>>ADDITION OF SUBAREA	TO MAINL	INE PEAK E	FLOW<		
MAINLINE TC(MIN) = 13.4 * 100 YEAR RAINFALL INTE	9 NSITY(INC				
DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
"OPEN BRUSH"	С	1.10	0.25	1.00	77
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" NATURAL FAIR COVER	С	0.30	0.25	1.00	79
"WOODLAND" NATURAL FAIR COVER	С	0.40	0.25	1.00	73
"OPEN BRUSH" AGRICULTURAL FAIR COVER		0.40	0.20	1.00	83
"PASTURE, DRYLAND" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HR TOTAL AREA (ACRES) =	D LOSS RAT AREA FRA 7.00 14.60 ) = 0.22	E, Fp(INCH CTION, Ap SUBAREA AREA-AV AREA-AVE	H/HR) = 0 = 1.00 RUNOFF(CF: VERAGED Fm ERAGED Ap	S) = 20. (INCH/HR) = 1.00	82 = 0.22
**************************************					
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDAL >>>>TRAVELTIME THRU SUB.	AREA (EXI	STING ELEM			=======
ELEVATION DATA: UPSTREAM CHANNEL LENGTH THRU SUBA CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE. FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO	REA(FEET) 2.00 "Z	= 387.0 "FACTOR = M DEPTH(FF 43.32 FLOW DE IIN.) = 14	00 CHANNI = 1.000 EET) = 2 EPTH(FEET)	EL SLOPE = .00 = 1.42	0.0775
**************************************	807.00	TO NODE	808.00 I	S CODE =	81
>>>>ADDITION OF SUBAREA	TO MAINL	INE PEAK E	FLOW<		
MAINLINE Tc(MIN) = 14.2 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A	1 NSITY(INC				

DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
NATURAL FAIR COVER "OPEN BRUSH"			0.25		
AGRICULTURAL FAIR COVER					
"PASTURE, DRYLAND"	С	2.60	0.25	1.00	79
NATURAL FAIR COVER "WOODLAND"	С	0.60	0.25	1.00	73
NATURAL FAIR COVER "GRASS"		0.10	0.20	1.00	84
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"		11.00	0.20	1.00	84
SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU				.21	
SUBAREA AREA(ACRES) =	15.00	SUBARE	A RUNOFF (CF:	s) = 43.2	21
EFFECTIVE AREA (ACRES) =	29.60	AREA-A	AVERAGED Fm	(INCH/HR) =	= 0.22
AREA-AVERAGED Fp(INCH/H TOTAL AREA(ACRES) =					85.16
******	******	******	****	*****	*****
FLOW PROCESS FROM NODE	808.00	TO NODE	809.00 I	S CODE =	51
>>>>COMPUTE TRAPEZOIDA					
>>>>TRAVELTIME THRU SU	BAREA (EXI	STING ELE	EMENT) <<<<		
ELEVATION DATA: UPSTREA					
CHANNEL LENGTH THRU SUB	AREA (FEET)	= 615.	.00 CHANNI	EL SLOPE =	0.0894
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04				.00	
CHANNEL FLOW THRU SUBAR	EA(CFS) =	85.16	5		
FLOW VELOCITY (FEET/SEC.				= 1.93	
TRAVEL TIME (MIN.) = 0 LONGEST FLOWPATH FROM N				00 = 2859	00 FEET
**************************************					
FLOW PROCESS FROM NODE	808.00	TO NODE	809.00 I	S CODE =	81
FLOW PROCESS FROM NODE	808.00 A TO MAINI	TO NODE	809.00 IS	S CODE = 8	81
FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 15.	808.00 A TO MAINI 	TO NODE	809.00 I: FLOW<<<<	S CODE = 8	81
FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 15.  * 100 YEAR RAINFALL INT	808.00 A TO MAINI 	TO NODE LINE PEAK CH/HR) =	809.00 I: FLOW<<<<	S CODE = 8	81
FLOW PROCESS FROM NODE	808.00  A TO MAINI  12  ENSITY(ING  AMC II):  SCS SOIL	TO NODE LINE PEAK CH/HR) = AREA	809.00 IS FLOW<<<< 3.286	S CODE = {	81  scs
FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 15.  * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/ LAND USE	808.00  A TO MAINI  12  ENSITY(ING  AMC II):  SCS SOIL	TO NODE LINE PEAK CH/HR) = AREA	809.00 I: FLOW<<<<	S CODE = {	81  scs
FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 15.  * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER	808.00 A TO MAINI LEAD 12 ENSITY(INC AMC II): SCS SOIL GROUP	TO NODE LINE PEAK CH/HR) = AREA (ACRES)	809.00 I: FLOW<<<< 3.286 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 15.  * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER	808.00 A TO MAINI ===================================	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40	809.00 I: FLOW<<<< 3.286 Fp (INCH/HR) 0.40	Ap (DECIMAL)	SCS CN 50
FLOW PROCESS FROM NODE	808.00 A TO MAINI 12 ENSITY(INC AMC II): SCS SOIL GROUP A A	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40	809.00 I: FLOW<<<< 3.286 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN 50
FLOW PROCESS FROM NODE	808.00 A TO MAINI ===================================	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90	809.00 I: FLOW<<<< 3.286 Fp (INCH/HR) 0.40 0.40	Ap (DECIMAL) 1.00	SCS CN 50
FLOW PROCESS FROM NODE	808.00 A TO MAINI ===================================	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.40 6.90 4.40	809.00 I: FLOW<<<< 3.286 Fp (INCH/HR) 0.40 0.40 0.40	Ap (DECIMAL)  1.00  1.00	SCS CN 50 46
FLOW PROCESS FROM NODE	808.00 A TO MAINI ===================================	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90	809.00 I: FLOW<<<< 3.286 Fp (INCH/HR) 0.40 0.40 0.40	Ap (DECIMAL)  1.00  1.00	SCS CN 50 46
FLOW PROCESS FROM NODE	808.00 A TO MAINI 12 ENSITY(INC AMC II): SCS SOIL GROUP A A A A	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00	809.00 I: FLOW<<<< 3.286 Fp (INCH/HR) 0.40 0.40 0.40	Ap (DECIMAL)  1.00  1.00  1.00  1.00	SCS CN 50 46 49
FLOW PROCESS FROM NODE	808.00 A TO MAINI ===================================	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00	809.00 I: FLOW<<<< 3.286 Fp (INCH/HR) 0.40 0.40 0.40 0.40 0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00	SCS CN 50 46 49 36
FLOW PROCESS FROM NODE	808.00 A TO MAINI ===================================	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00  1.40	809.00 I: FLOW<<<<< 3.286 Fp (INCH/HR) 0.40 0.40 0.40 0.40 0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 50 46 49
FLOW PROCESS FROM NODE	808.00 A TO MAINI 12 ENSITY(INC AMC II): SCS SOIL GROUP A A A B B S LOSS RAT	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00  1.40  TE, FP(ING	809.00 I: FLOW<<<<< 3.286 Fp (INCH/HR) 0.40 0.40 0.40 0.40 0.30 0.30 CH/HR) = 0	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 50 46 49 36
FLOW PROCESS FROM NODE	808.00  A TO MAINI  12 ENSITY(INC AMC II): SCS SOIL GROUP  A  A  A  B  B  S LOSS RAIS S AREA FRI 29.10	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00  1.40  OFE, FP(INK ACTION, AN SUBAREJ SUBAREJ	809.00 I: FLOW<<<<  3.286 Fp (INCH/HR) 0.40 0.40 0.40 0.40 0.30 0.30 CH/HR) = 0 0.21 A RUNOFF (CF:	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  38	SCS CN 50 46 49 36 69 66
FLOW PROCESS FROM NODE	808.00  A TO MAINI  12 ENSITY(INC AMC II): SCS SOIL GROUP  A  A  A  B  B  S LOSS RAI S AREA 29.10 58.70	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00  1.40  FP (INCACTION, ANG SUBAREA  UBAREA AREA-2  AREA-2	809.00 I: FLOW<<<<  3.286 Fp (INCH/HR) 0.40 0.40 0.40 0.40 0.40 0.30 0.30 CH/HR) = 0 0 = 1.00 A RUNOFF(CF: AVERAGED FM	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  38  S) = 76.(INCH/HR)	SCS CN 50 46 49 36 69 66
FLOW PROCESS FROM NODE	808.00  A TO MAINI  ELEMENT (INC AMC II): SCS SOIL GROUP  A  A  A  B  B  S LOSS RAI S AREA FRA 29.10 58.70 R) = 0.36	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00  1.40  TE, FP(INC ACTION, AN SUBAREA SUBAREA AREA-AN AREA-AN AREA-AN AREA-AN	809.00 I: FLOW<<<<  3.286 Fp (INCH/HR) 0.40 0.40 0.40 0.30 0.30 0.30 0.31 CH/HR) = 0 0 = 1.00 A RUNOFF (CFF. AVERAGED FM FERAGED AP	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 50 46 49 36 69 66
FLOW PROCESS FROM NODE	808.00	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00  1.40  TE, FP(INC ACTION, AR SUBAREA ACTION, AR SUBAREA AREA-AV PEAK I	809.00 I: FLOW<<<<  3.286  Fp (INCH/HR)  0.40  0.40  0.40  0.30  CH/HR) = 0 0 = 1.00 A RUNOFF(CF: AVERAGED FM /FRAGED AP FLOW RATE(CI	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 50 46 49 36 69 66
FLOW PROCESS FROM NODE	808.00  A TO MAINI  12  ENSITY(INC AMC II): SCS SOIL GROUP  A  A  A  B  B  S LOSS RAT S AREA FR 29.10 58.70  78.) = 0.36 58.70	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00  1.40  PE, FP(INC ACTION, AF SUBAREA, AREA-A PEAK I	809.00 I: FLOW<<<<< 3.286 Fp (INCH/HR) 0.40 0.40 0.40 0.30 0.30 0.30 0.40 A RUNOFF (CF: AVERAGED Fm VERAGED Ap: FLOW RATE (CI: ************************************	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  5) = 76.00  (INCH/HR) = 1.00  FS) = 1.00  FS) = 1.00	SCS CN 50 46 49 36 69 66
FLOW PROCESS FROM NODE	808.00	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.40  6.90  4.40  12.00  4.00  1.40  ACTION, AS SUBAREA D AREA-AN PEAK I  **********  TO NODE	809.00 I: FLOW<<<<< 3.286 Fp (INCH/HR) 0.40 0.40 0.40 0.30 CH/HR) = 0 0 = 1.00 A RUNOFF (CF: AVERAGED Fm ERRAGED Fm ERRAGED FM FLOW RATE (CI: ************************************	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  5) = 76.1  (INCH/HR) = 1.00  FS) = 1.00  Ap (DECIMAL)	SCS CN 50 46 49 36 69 66

MATNITAND (MTN) - 15						
MAINLINE TC (MIN) = 15.		~ / \	2 226			
* 100 YEAR RAINFALL INT			3.286			
SUBAREA LOSS RATE DATA(						
DEVELOPMENT TYPE/ LAND USE	SCS SOIL	AREA	Fp	Ap	SCS	
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
LIND OOD	011001	(попшо)	(111011/1111)	(DECITED)	CIV	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"						
"PASTURE, DRYLAND"	В	16.90	0.30	1.00	69	
NATURAL FAIR COVER "WOODLAND"						
"WOODLAND"	В	6.20	0.30	1.00	60	
NATURAL POOR COVER						
	0	0 10	0.05	1 00	0.1	
"BARREN"	C	0.10	0.25	1.00	91	
NATURAL FAIR COVER						
"GRASS"	C	82.60	0.25	1.00	79	
NATURAL FAIR COVER						
"OPEN BRUSH"	C	12.50	0.25	1.00	77	
"OPEN BRUSH" COMMERCIAL	C	5 20	0.25	0.10	69	
					0.9	
SUBAREA AVERAGE PERVIOU				.26		
SUBAREA AVERAGE PERVIOU						
SUBAREA AREA(ACRES) =	123.50	SUBARE	A RUNOFF (CF:	s) = 337.	48	
EFFECTIVE AREA(ACRES) =	182.20	AREA-	AVERAGED Fm	(INCH/HR)	= 0.27	
AREA-AVERAGED Fp(INCH/H	P = 0.2	7 APFA-A	VERACED An :	0 97		
TOTAL AREA (ACRES) =	100 00	ALLEA A	TION DAME (C)	= 0.57	405 22	
TOTAL AREA (ACRES) =	182.20	PEAR	FLOW RATE (C.	15) =	493.32	
*******	*****	*****	*****	*****	*****	
FLOW PROCESS FROM NODE	808.00	TO NODE	809.00 I	S CODE =	81	
>>>>ADDITION OF SUBARE						
MAINLINE $Tc(MIN) = 15$ .	12					
* 100 YEAR RAINFALL INT	ENSITY (INC	CH/HR) =	3.286			
SUBAREA LOSS RATE DATA(						
SUBAREA LUSS RAIE DAIA(	AMC II):		_	_		
DEVELOPMENT TYPE/	SCS SOIL	AREA	F,b	Ap	SCS	
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"						
"PASTURE, DRYLAND"	C	1.60	0.25	1.00	79	
NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER	Ü	1.00	0.20	1.00	. 3	
NATURAL PAIR COVER	_				= 0	
"WOODLAND"	C	49.50	0.25	1.00	/3	
NATURAL FAIR COVER						
"GRASS"	D	7.50	0.20	1.00	84	
NATURAL FAIR COVER						
NATONAL PAIN COVER	Б.	10 00	0 00	1 00	0.2	
"OPEN BRUSH" PUBLIC PARK	D		0.20			
PUBLIC PARK	D	0.10	0.20	0.85	75	
AGRICULTURAL FAIR COVER						
"PASTURE, DRYLAND"	D	18.90	0.20	1.00	84	
SUBAREA AVERAGE PERVIOU						
				. 23		
SUBAREA AVERAGE PERVIOU						
SUBAREA AREA(ACRES) =	90.50	SUBARE	A RUNOFF (CF:	3) = 249.	0.7	
EFFECTIVE AREA(ACRES) =	272.70	) AREA-	AVERAGED Fm	(INCH/HR)	= 0.25	
AREA-AVERAGED Fp(INCH/H	(R) = 0.26	S AREA-A	VERAGED Ap :	= 0.98		
TOTAL AREA(ACRES) =	272 70	PEAK 1	FLOW BATE (C)	FS) =	744 39	
TOTAL AREA (ACRES) -	212.10	LLMI	LIOW IMIL (C.		744.33	
*******	*****	*****	****	*****	*****	
FLOW PROCESS FROM NODE	808.00	TO NODE	809.00 I	S CODE =	81	
>>>>ADDITION OF SUBARE	A TO MATNI	TNE DEAK	EI OMZZZZZ			
MAINLINE Tc $(MIN) = 15$ .	12					
* 100 YEAR RAINFALL INT	ENSITY (IN	CH/HR) =	3.286			
SUBAREA LOSS RATE DATA(						
DEVELOPMENT TYPE/	200 0011	A D E A	Ex	7	CCC	
DEVELOPMENT TYPE/	aca soil	AKEA	гþ	Ap	505	
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
NATURAL FAIR COVER						
"WOODLAND"	D	12.30	0.20	1.00	79	
SUBAREA AVERAGE PERVIOU					•	
				0		
SUBAREA AVERAGE PERVIOU						
SUBAREA AREA(ACRES) =	12.30	SUBARE	A RUNOFF (CF:	34.	16	

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EFFECTIVE AREA(ACRES) = 285.00 AREA-AVERAGED Fm(INCH/HR) = 0.25 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 285.00 PEAK FLOW RATE(CFS) =
********************
 FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 195.00 DOWNSTREAM(FEET) = 176.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 6031.00 CHANNEL SLOPE = 0.0032
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 778.56
 FLOW VELOCITY (FEET/SEC.) = 4.30 FLOW DEPTH (FEET) = 2.03
 TRAVEL TIME (MIN.) = 23.37 Tc (MIN.) = 38.49
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 826.00 = 8890.00 FEET.
************
 FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 38.49
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.925
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                  Fp
                                        Дp
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         0.90
                                 0.40
                                        1.00 46
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                                        1.00 49
                           0.10
                                 0.40
 NATURAL FAIR COVER
 "WOODLAND"
                         5.20 0.40
                                        1.00 36
 NATURAL FAIR COVER
                           5.70 0.30
                                        1.00 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         1.70 0.30 1.00 66
 AGRICULTURAL FAIR COVER
                                0.30 1.00 69
 "PASTURE, DRYLAND"
                   B
                          1.40
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.34
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 15.00 SUBAREA RUNOFF(CFS) = 21.38
 EFFECTIVE AREA(ACRES) = 300.00 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 300.00 PEAK FLOW RATE(CFS) = 778.56
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 38.49
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.925
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                        Ap
                                Fp
                                               SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "WOODLAND"
                          10.30
                                  0.30
                   В
                                        1.00 60
 NATURAL FAIR COVER
 "GRASS"
                          143.70
                                 0.25
                                        1.00 79
 NATURAL FAIR COVER
                          11.50
                                  0.25
                                          1.00 77
 "OPEN BRUSH"
                                          0.10 69
                          2.90
                                  0.25
 COMMERCIAL
 AGRICULTURAL FAIR COVER
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"PASTURE, DRYLAND"
                          0.30
                                0.25
                                       1.00
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                 C
                         0.90 0.25 1.00 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
                        SUBAREA RUNOFF(CFS) = 255.83
 SUBAREA AREA(ACRES) = 169.60
 EFFECTIVE AREA(ACRES) = 469.60 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 469.60
                         PEAK FLOW RATE(CFS) =
                                           778.56
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****
 FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
MAINLINE Tc(MIN) = 38.49
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.925
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                Fρ
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND"
                         8.30
                                 0.25
                                       1.00
                                             73
                   C
 NATURAL FAIR COVER
 "GRASS"
                        14.50
                               0.20
                                       1 00 84
                   D
 NATURAL FAIR COVER
                        22.20
 "OPEN BRUSH"
                               0.20
                                       1.00
                                             83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                   D
                        6.80
                               0.20
                                       1.00
                                             84
 NATURAL FAIR COVER
                               0.20 1.00 79
                   D
                       19 00
 "MOODI.AND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 70.80
                       SUBAREA RUNOFF(CFS) = 109.56
 EFFECTIVE AREA(ACRES) = 540.40 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.99
 TOTAL AREA(ACRES) = 540.40
                        PEAK FLOW RATE(CFS) = 816.25
*******************
FLOW PROCESS FROM NODE 826.00 TO NODE 826.00 IS CODE = 10
______
>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
______
FLOW PROCESS FROM NODE 3157.00 TO NODE 3157.00 IS CODE = 15.1
>>>>DEFINE MEMORY BANK # 2 <<<<
PEAK FLOWRATE TABLE FILE NAME: CE31100H.DNA
 MEMORY BANK # 2 DEFINED AS FOLLOWS:
 STREAM Q Tc Fp(Fm) Ap Ae
                                 HEADWATER
 NUMBER (CFS) (MIN.) (INCH/HR)
                           (ACRES) NODE
   1 3933.83 44.38 0.26(0.25) 0.98 2862.7 3120.00
    2 3677.66 50.26 0.26(0.25) 0.98 2931.7 3100.00
  TOTAL AREA(ACRES) = 2931.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3157.00 = 29599.00 FEET.
******************
FLOW PROCESS FROM NODE 3157.00 TO NODE 3157.00 IS CODE = 14.0
._____
>>>>MEMORY BANK # 2 COPIED ONTO MAIN-STREAM MEMORY<
_____
 MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
 STREAM Q Tc Fp(Fm) Ap Ae
                                   HEADWATER
                         (ACRES) NODE
```

NUMBER (CFS) (MIN.) (INCH/HR)

```
1 3933.83 44.38 0.26( 0.25) 0.98 2862.7
2 3677.66 50.26 0.26( 0.25) 0.98 2931.7
                                      3120.00
                                      3100.00
  TOTAL AREA(ACRES) = 2931.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3157.00 = 29599.00 FEET.
FLOW PROCESS FROM NODE 3157.00 TO NODE 3157.00 IS CODE = 12
______
 >>>>CLEAR MEMORY BANK # 2 <<<<
*******************
 FLOW PROCESS FROM NODE 3157.00 TO NODE 820.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 352.00 DOWNSTREAM(FEET) = 310.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 2262.00 CHANNEL SLOPE = 0.0186
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3933.83
 FLOW VELOCITY (FEET/SEC.) = 15.56 FLOW DEPTH (FEET) = 7.72
 TRAVEL TIME (MIN.) = 2.42 Tc (MIN.) = 46.81
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 820.00 = 31861.00 FEET.
******************
 FLOW PROCESS FROM NODE 3157.00 TO NODE 820.00 IS CODE = 81
.....
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE TC (MIN) = 46.81
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.723
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                 Fp
                                       Aρ
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                          31.50
                                  0.30
                                         1.00
                                               86
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.90
                                  0.30
                                         1.00
                                               6.3
 NATURAL FAIR COVER
 "GRASS"
                          0.20
                                 0.30
                                               69
                    В
                                         1.00
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                          0.10
                                  0.30
                                         1.00
                                               6.5
                    В
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          0.40
                                 0.30
                                         1 00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    В
                          5.40
                                0.30
                                       1.00
                                               69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 38.50 SUBAREA RUNOFF(CFS) = 49.32
 EFFECTIVE AREA(ACRES) = 2901.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 2970.20 PEAK FLOW RATE(CFS) = 3933.83
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
 FLOW PROCESS FROM NODE 3157.00 TO NODE 820.00 IS CODE = 81
.....
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 46.81
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.723
 SUBAREA LOSS RATE DATA(AMC II):
                                       Ap SCS
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                 Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
```

	В	0.20	0.30	1.00	60
AGRICULTURAL POOR COVER "FALLOW"	С	8.40	0.25	1.00	91
NATURAL FAIR COVER					-
"CHAPARRAL, BROADLEAF" NATURAL FAIR COVER	С	19.40	0.25	1.00	75
"GRASS"	С	7.40	0.25	1.00	79
NATURAL FAIR COVER	0	20.00	0.05	1 00	7.7
"OPEN BRUSH" AGRICULTURAL POOR COVER	C	39.90	0.25	1.00	11
"FALLOW"	D	5 00	0.20	1 00	0.4
SUBAREA AVERAGE PERVIOUS					34
SUBAREA AVERAGE PERVIOUS					
				) = 107.8	80
SUBAREA AREA(ACRES) = 8 EFFECTIVE AREA(ACRES) =	2982.27	AREA-AV	ERAGED Fm (	INCH/HR) =	= 0.25
AREA-AVERAGED Fp(INCH/HR)	= 0.26	AREA-AVE	RAGED Ap =	0.98	
TOTAL AREA(ACRES) = 305	1.30	PEAK FI	OW RATE (CF	S) = 39	947.42
******					
FLOW PROCESS FROM NODE			020.00 13		
>>>>ADDITION OF SUBAREA	TO MAINL	INE PEAK E	LOW<<<		
		=======		=======	========
MAINLINE TC (MIN) = 46.81		/	700		
* 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA(AM			. 123		
DEVELOPMENT TYPE/ S	CS SOTT	ADFA	Fn	Δn	909
LAND USE	CBUILD	(ACRES)	INCH/HR)	(DECIMAL)	CN
NATURAL FAIR COVER	01.001	(1101120)	(211011) 1111)	(22021212)	021
"GRASS"	D	2.60	0.20	1.00	84
AGRICULTURAL FAIR COVER					
"ORCHARDS"	D	0.80	0.20	1.00	82
NATURAL FAIR COVER					
"OPEN BRUSH"	D	3.20	0.20	1.00	83
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	D	21 70	0.20	1 00	0.1
NATURAL FAIR COVER	D	21.70	0.20	1.00	04
"WOODLAND"	D	4.60	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS	LOSS RAT	E, Fp(INCH	I/HR) = 0.	20	
SUBAREA AVERAGE PERVIOUS .					
SUBAREA AREA(ACRES) = 3	2.90	SUBAREA	RUNOFF (CFS	) = 45.3	11
EFFECTIVE AREA(ACRES) =	3015.17	AREA-AV	ERAGED Fm(	INCH/HR) =	= 0.25
AREA-AVERAGED Fp(INCH/HR) TOTAL AREA(ACRES) = 308					000 50
TOTAL AREA(ACRES) = 308	4.20	PEAK FI	OW RATE (CF	5) = 3:	992.33
******	*****	*****	*****	*****	****
FLOW PROCESS FROM NODE	820.00	TO NODE	821.00 IS	CODE = 5	51
>>>>COMPUTE TRAPEZOIDAL					
>>>>TRAVELTIME THRU SUBA					
ELEVATION DATA LIDOTDEAM					
ELEVATION DATA: UPSTREAM(					
CHANNEL LENGTH THRU SUBAR CHANNEL BASE (FEET) = 25				L SLOPE =	0.0133
MANNING'S FACTOR = 0.040				00	
CHANNEL FLOW THRU SUBAREA				0.0	
FLOW VELOCITY (FEET/SEC.)				= 8.57	
TRAVEL TIME (MIN.) = 0.9				3.07	
LONGEST FLOWPATH FROM NOD	E 3100	.00 TO NOI	E 821.0	0 = 32615	.00 FEET.
*******					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
MAINLINE Tc (MIN) = 47.71					
* 100 YEAR RAINFALL INTEN		H/HR) = 1	.703		
		-			

```
SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                       Ap SCS
                               Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                          1.90
                                 0.30
                                        1.00
 NATURAL FAIR COVER
 "GRASS"
                  в 2.30 0.30
                                       1.00
 AGRICULTURAL FAIR COVER
 "ORCHARDS" B 16.80 0.30 1.00 65
 NATURAL FAIR COVER
 "OPEN BRUSH"
                  B 2.20 0.30 1.00 66
                    в 0.20 0.30 0.85
 PUBLIC PARK
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" B 23.70 0.30 1.00 69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 47.10 SUBAREA RUNOFF(CFS) = 59.47
 EFFECTIVE AREA(ACRES) = 3062.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 3131.30 PEAK FLOW RATE (CFS) = 3995.47
************
FLOW PROCESS FROM NODE 820.00 TO NODE 821.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 47.71
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.703
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                         0.40
                               0.25
                                       1.00 91
 AGRICULTURAL POOR COVER
 "FALLOW" D 0.70 0.20 1.00 94
 NATURAL FAIR COVER
 "GRASS"
                  D 2.90 0.20 1.00 84
 AGRICULTURAL FAIR COVER
 "ORCHARDS" D 4.30 0.20 1.00 82
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D 38.30 0.20 1.00 83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D
                        95.20
                               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) = 141.80 SUBAREA RUNOFF(CFS) = 191.75
 EFFECTIVE AREA(ACRES) = 3204.07 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 3273.10 PEAK FLOW RATE(CFS) = 4187.22
*****
 FLOW PROCESS FROM NODE 820.00 TO NODE 821.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 47.71
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.703
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 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) = 1.00 SUBAREA RUNOFF(CFS) = 1.35
 EFFECTIVE AREA(ACRES) = 3205.07 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
```

```
TOTAL AREA(ACRES) = 3274.10
                           PEAK FLOW RATE (CFS) = 4188.57
*******************
 FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 300.00 DOWNSTREAM(FEET) = 270.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1631.00 CHANNEL SLOPE = 0.0184
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4188.57
 FLOW VELOCITY (FEET/SEC.) = 15.81 FLOW DEPTH (FEET) = 8.02
 TRAVEL TIME (MIN.) = 1.72 Tc (MIN.) = 49.43
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 822.00 = 34246.00 FEET.
*******************
 FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
______
 MAINLINE TO (MIN) = 49.43
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.663
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                                  Fp
                   SCS SOTE AREA
                                          Αp
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           11.10
                                   0.30
                                           1.00
                                                 86
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.40
                                   0.30
                                           1.00
                     B
                                                 63
 NATURAL FAIR COVER
 "GRASS"
                           4.20
                                   0.30
                                           1.00
                                                 69
                     В
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                          5.60
                                 0.30
                                           1.00 65
                     В
 URBAN FAIR COVER
 "TURF"
                            0.30
                                 0.30
                                         1.00 65
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    В
                           1.10
                                  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) = 22.70 SUBAREA RUNOFF(CFS) = 27.85
 EFFECTIVE AREA(ACRES) = 3227.77 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 3296.80 PEAK FLOW RATE (CFS) = 4188.57
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
 FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 49.43
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.663
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                Fp
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                           5.30
                                   0.25
                                           1 00 91
                     C
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           20.20
                                   0.25
                     C
                                           1.00
                                                 7.5
 NATURAL FAIR COVER
 "GRASS"
                     C
                           17.70
                                   0.25
                                           1.00
                                                 79
 AGRICULTURAL FAIR COVER
                            0.70
 "ORCHARDS"
                                   0.25
                                           1.00 77
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                                           1.00 77
                           41.60
                                   0.25
```

```
AGRICULTURAL POOR COVER
                    D
                           2.30 0.20 1.00 94
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 87.80 SUBAREA RUNOFF(CFS) = 111.77
 EFFECTIVE AREA(ACRES) = 3315.57 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 3384.60
                        PEAK FLOW RATE (CFS) = 4214.10
*******************
 FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
_____
 MAINITHE TC (MIN) = 49.43
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.663
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fρ
                                         αA
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           1.30
                                   0.20
                                          1.00
                                                81
 RESIDENTIAL.
 "5-7 DWELLINGS/ACRE"
                           0.30
                     D
                                  0.20
                                          0.50
                                               75
 NATURAL FAIR COVER
 "GRASS"
                           5 40
                                  0.20
                                          1 00
                                                84
                     D
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                           0.20
                                  0.20
                                          1.00
                                                82
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           6.40
                                  0.20
                                          1.00
                                                83
 NATURAL FAIR COVER
                                0.20 1.00 79
 "WOODI.AND"
                     D
                         4.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA (ACRES) = 17.60 SUBAREA RUNOFF (CFS) = 23.20
 EFFECTIVE AREA(ACRES) = 3333.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 3402.20 PEAK FLOW RATE(CFS) = 4237.31
*******************
 FLOW PROCESS FROM NODE 822.00 TO NODE 823.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
-----
 ELEVATION DATA: UPSTREAM(FEET) = 270.00 DOWNSTREAM(FEET) = 255.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1203.00 CHANNEL SLOPE = 0.0125
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4237.31
 FLOW VELOCITY (FEET/SEC.) = 13.81 FLOW DEPTH (FEET) = 9.02
 TRAVEL TIME (MIN.) = 1.45 Tc (MIN.) = 50.88
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 823.00 = 35449.00 FEET.
*****
 FLOW PROCESS FROM NODE 822.00 TO NODE 823.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 50.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.636
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fρ
                                        αA
                                               SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                           1.50
                                  0.30
                                          1.00
                                                86
 RESIDENTIAL.
 "5-7 DWELLINGS/ACRE"
                    В
                          17.80
                                  0.30
                                          0.50 56
```

NATURAL FAIR COVER "GRASS"	В	9.60	0.30	1.00	69	
URBAN FAIR COVER			0.30			
NATURAL FAIR COVER	Ð	3.00	0.30	1.00	63	
"OPEN BRUSH"		3.80	0.30	1.00	66	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"		11.90	0.30	1.00	69	
SUBAREA AVERAGE PERVIOU				.30		
SUBAREA AVERAGE PERVIOU				g) = 62	0.4	
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	3382.7	7 AREA-	A KONOFF(CF AVERAGED Fm	(TNCH/HR)	= 0.25	
AREA-AVERAGED Fp(INCH/H	R) = 0.2	6 AREA-A	VERAGED Ap	= 0.98		
TOTAL AREA(ACRES) = 3					237.31	
NOTE: PEAK FLOW RATE DE	FAULTED T	O UPSTREA	M VALUE			
*****	*****	*****	*****	*****	*****	****
FLOW PROCESS FROM NODE						
>>>>ADDITION OF SUBARE						
MAINLINE Tc(MIN) = 50.						
* 100 YEAR RAINFALL INT	ENSITY(IN		1.636			
SUBAREA LOSS RATE DATA(	AMC II):					
DEVELOPMENT TYPE/ LAND USE	SCS SOIL	AREA	Fp	Ap	SCS	
	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	C	4 10	0.25	1 00	75	
NATURAL FAIR COVER	C	4.10	0.23	1.00	75	
"CPASS"	С	8.90	0.25	1.00	79	
NATURAL FAIR COVER						
"OPEN BRUSH"	C	18.20	0.25	1.00	77	
AGRICULTURAL FAIR COVER						
"PASTURE, DRYLAND"	С	5.70	0.25	1.00	79	
NATURAL FAIR COVER "WOODLAND"	C	2 70	0.25	1 00	73	
AGRICULTURAL POOR COVER						
"FALLOW"			0.20		94	
SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU				. 23		
SUBAREA AREA (ACRES) =	41.00	SUBARE	A RUNOFF(CF	s) = 51.	20	
EFFECTIVE AREA(ACRES) =	3423.7	7 AREA-	AVERAGED Fm	(INCH/HR)	= 0.25	
AREA-AVERAGED Fp(INCH/H	R) = 0.2	6 AREA-A	VERAGED Ap	= 0.98		
TOTAL AREA(ACRES) = 3	492.80	PEAK	FLOW RATE(C	FS) = 4:	268.90	
*******						****
FLOW PROCESS FROM NODE						
>>>>ADDITION OF SUBARE						
MAINLINE Tc(MIN) = 50.						
* 100 YEAR RAINFALL INT	•		1.636			
SUBAREA LOSS RATE DATA(			_	_	~~~	
DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	SCS	
LAND USE NATURAL FAIR COVER	GKUUP	(ACRES)	(INCH/HR)	(DECIMAL)	CIN	
"CHAPARRAL, BROADLEAF"	D	3.30	0.20	1.00	81	
RESIDENTIAL	-	3.00	J.20			
"5-7 DWELLINGS/ACRE"	D	6.80	0.20	0.50	75	
NATURAL FAIR COVER						
"GRASS"	D	49.20	0.20	1.00	84	
URBAN FAIR COVER	Б.	4 00	0.00	1 00	0.0	
"TURF"	D	4.00	0.20	1.00	82	
NATURAL FAIR COVER "OPEN BRUSH"	D	33.40	0.20	1.00	83	
AGRICULTURAL FAIR COVER		55.40	0.20	1.00	0.0	
"PASTURE, DRYLAND"	D	46.90	0.20	1.00	84	

```
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 143.60 SUBAREA RUNOFF(CFS) = 186.18
 EFFECTIVE AREA(ACRES) = 3567.37 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 3636.40 PEAK FLOW RATE (CFS) = 4455.08
******************
FLOW PROCESS FROM NODE 822.00 TO NODE 823.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
_____
 MAINLINE Tc(MIN) = 50.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.636
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                        Ap SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "WOODLAND"
                    D
                         2.00 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) = 2.00 SUBAREA RUNOFF(CFS) = 2.58
 EFFECTIVE AREA(ACRES) = 3569.37 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 3638.40 PEAK FLOW RATE(CFS) = 4457.67
*****************
 FLOW PROCESS FROM NODE 823.00 TO NODE 824.00 IS CODE = 51
.....
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 255.00 DOWNSTREAM(FEET) = 235.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1331.00 CHANNEL SLOPE = 0.0150
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4457.67
 FLOW VELOCITY (FEET/SEC.) = 14.98 FLOW DEPTH (FEET) = 8.80
 TRAVEL TIME (MIN.) = 1.48 Tc (MIN.) = 52.36
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 824.00 = 36780.00 FEET.
********************
 FLOW PROCESS FROM NODE 823.00 TO NODE 824.00 IS CODE = 81
_____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 52.36
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.612
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                        Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           2.50
                                  0.30
                                         1.00 86
 NATURAL FAIR COVER
 "GRASS"
                           2.20
                                  0.30
                                          1.00
 NATURAL FAIR COVER
                           4.60
 "OPEN BRUSH"
                                  0.30
                                          1.00
                                                66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          23.20
                                  0.30
                                          1 00
                                                69
 NATURAL FAIR COVER
 "WOODT,AND"
                           0.60
                                 0.30 1.00
                    В
                                                60
 AGRICULTURAL POOR COVER
                           0.20
                                 0.25 1.00 91
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 33.30 SUBAREA RUNOFF (CFS) = 39.33
 EFFECTIVE AREA(ACRES) = 3602.67 AREA-AVERAGED Fm(INCH/HR) = 0.25
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AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98 TOTAL AREA(ACRES) = 3671.70 PEAK FLOW RATE(CFS) = 4457.67
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
.....
 FLOW PROCESS FROM NODE 823.00 TO NODE 824.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC(MIN) = 52.36
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.612
 SUBAREA LOSS RATE DATA(AMC II):
                SCS SOIL AREA
                                         Ap SCS
 DEVELOPMENT TYPE/
                                 Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                           1.30
                                                75
 "CHAPARRAL, BROADLEAF"
                    C
                                   0.25
                                          1.00
 NATURAL FAIR COVER
 "GRASS"
                     C
                          9.50
                                   0.25
                                          1.00
                                                79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           49.80
                                   0.25
                                          1.00
                                                77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    C
                           32.30
                                   0.25
                                          1.00
                                                79
 NATURAL FAIR COVER
 "WOODLAND"
                          7.20
                                 0.25
                    C
                                          1 00
                                                73
 AGRICULTURAL POOR COVER
 "FALLOW"
                          1.00
                                0.20 1.00 94
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 101.10 SUBAREA RUNOFF(CFS) = 123.99
 EFFECTIVE AREA(ACRES) = 3703.77 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 3772.80
                          PEAK FLOW RATE (CFS) = 4544.90
******************
 FLOW PROCESS FROM NODE 823.00 TO NODE 824.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 52.36
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.612
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                         Ap
                                               SCS
                                Fp
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           6 40
                                   0.20
                                          1.00
 NATURAL FAIR COVER
 "GRASS"
                          1.10
                                   0.20
                                          1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     D
                         16.40
                                   0.20
                                          1.00
                                                8.3
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                         41.20
                                   0.20
                    D
                                         1.00 84
 NATURAL FAIR COVER
                    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) = 67.40 SUBAREA RUNOFF(CFS) = 85.66
 EFFECTIVE AREA(ACRES) = 3771.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 3840.20 PEAK FLOW RATE(CFS) = 4630.56
*****
 FLOW PROCESS FROM NODE 824.00 TO NODE 825.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 235.00 DOWNSTREAM(FEET) = 210.00
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CHANNEL LENGTH THRU SUBAREA(FEET) = 1566.00 CHANNEL SLOPE = 0.0160 CHANNEL BASE(FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4630.56
 FLOW VELOCITY (FEET/SEC.) = 15.47 FLOW DEPTH (FEET) = 8.85
 TRAVEL TIME (MIN.) = 1.69 Tc (MIN.) = 54.05
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 825.00 = 38346.00 FEET.
*****
 FLOW PROCESS FROM NODE 824.00 TO NODE 825.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 54.05
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.585
 SUBAREA LOSS RATE DATA (AMC II):
  DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fp
                                            Ap SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                             0.40
                                     0.40
                                             1.00
                                                   49
 AGRICULTURAL POOR COVER
 "FALLOW"
                      B
                             6.30
                                     0.30
                                             1.00
                                                   86
 NATURAL FAIR COVER
 "GRASS"
                             0.40
                                     0.30
                      В
                                             1 00
                                                   69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                             2.90
                                     0.30
                                             1.00
                      В
                                                   66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" B
                            23.30
                                    0.30
                                             1.00
 NATURAL FAIR COVER
 "WOODLAND"
                           2.30 0.30 1.00
                      В
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 35.60 SUBAREA RUNOFF (CFS) = 41.14
 EFFECTIVE AREA(ACRES) = 3806.77 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 3875.80 PEAK FLOW RATE(CFS) = 4630.56
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
 FLOW PROCESS FROM NODE 824.00 TO NODE 825.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 54.05
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.585
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                    Fp
                                           Ap
    LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
                                     0.25
 "FAT.T.OW"
                             2.00
                                             1.00
                                                   91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                             0.70
                                     0.25
                                             1.00
                                                   75
 NATURAL FAIR COVER
 "GRASS"
                             2.50
                                     0.25
                                             1.00
                                                  79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            22.30
                                     0.25
                                             1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C
                            27.10
                                    0.25
                                             1.00
                                                  79
 NATURAL FAIR COVER
 "WOODLAND"
                      С
                            13.80
                                   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) = 68.40
                           SUBAREA RUNOFF(CFS) = 82.19
 EFFECTIVE AREA(ACRES) = 3875.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 3944.20 PEAK FLOW RATE(CFS) = 4662.26
```

******	****	*****	*****	*****	****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
MAINLINE Tc(MIN) = 54.( * 100 YEAR RAINFALL INTE	)5 CNSITY(ING AMC II):	CH/HR) =	1.585		
DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER	GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
"FALLOW" NATURAL FAIR COVER		0.70	0.20	1.00	94
"OPEN BRUSH" AGRICULTURAL FAIR COVER		8.90	0.20	1.00	83
"PASTURE, DRYLAND"  NATURAL FAIR COVER	D	34.60	0.20	1.00	84
"WOODLAND"	D	5.10	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED Fp (INCH/HH TOTAL AREA (ACRES) = 35	3924.4 3924.4 393.50	ACTION, Ap SUBAREA 7 AREA-A 5 AREA-AV PEAK B	D = 1.00 RUNOFF(CF VERAGED FM YERAGED AP YLOW RATE(C	S) = 61. (INCH/HR) = 0.98 FS) = 4	= 0.25 723.72
**************************************	825.00	TO NODE	826.00 I	S CODE =	51
>>>>COMPUTE TRAPEZOIDAI	CHANNEL BAREA (EX	FLOW<<<<	: SMENT) <<<<		
CHANNEL BASE (FEET) = 2 MANNING'S FACTOR = 0.04 CHANNEL FLOW THRU SUBARI FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 3. LONGEST FLOWPATH FROM NO	MAXIMO EA(CFS) = = 14.25 19 Tc(I DDE 3100	JM DEPTH(F 4723.72 5 FLOW D MIN.) = 5 0.00 TO NO	TEET) = 10 DEPTH (FEET) 17.24 DDE 826.	= 9.59 00 = 41069	
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
MAINLINE TC(MIN) = 57.2 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A	NSITY(ING				
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER		0.20	0.40	1.00	77
"GRASS" NATURAL FAIR COVER	A	0.40	0.40	1.00	50
"OPEN BRUSH" AGRICULTURAL FAIR COVER	A	0.90	0.40	1.00	46
"PASTURE, DRYLAND"  NATURAL FAIR COVER	A	0.60	0.40	1.00	49
"WOODLAND" AGRICULTURAL POOR COVER	A	0.60	0.40	1.00	36
"FALLOW" SUBAREA AVERAGE PERVIOUS	B LOSS RA		0.30 H/HR) = 0		86
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA(ACRES) =	AREA FR	ACTION, Ar	= 1.00		76
EFFECTIVE AREA(ACRES) =				,	
AREA-AVERAGED Fp(INCH/H					

```
TOTAL AREA(ACRES) = 3999.80 PEAK FLOW RATE(CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
********************
 FLOW PROCESS FROM NODE 825.00 TO NODE 826.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 57.24
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.534
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                              Fp Ap
                                             SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          1.10
                                 0.30
                                        1.00
 NATURAL FAIR COVER
                        0.40 0.30
 "WOODLAND"
                                       1.00
                                              60
 AGRICULTURAL POOR COVER
 "FALLOW"
                               0.25
                         11.60
                                       1.00 91
 NATURAL FAIR COVER
                         19.20 0.25 1.00 79
 "GRASS"
 NATURAL FAIR COVER
 "OPEN BRUSH"
                  C 16.70 0.25 1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C
                        0.20 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) = 49.20
                         SUBAREA RUNOFF(CFS) = 56.80
 EFFECTIVE AREA(ACRES) = 3979.97 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 4049.00 PEAK FLOW RATE(CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
FLOW PROCESS FROM NODE 825.00 TO NODE 826.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 57.24
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.534
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                      Ap SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "WOODLAND"
                          1.00
                               0.25
                                        1.00 73
 AGRICULTURAL POOR COVER
 "FALLOW"
                          2.50 0.20
                                       1.00
                                              94
 NATURAL FAIR COVER
                   D
 "GRASS"
                          4.50 0.20
                                      1.00 84
 NATURAL FAIR COVER
                  D
 "OPEN BRUSH"
                          6.40 0.20 1.00 83
 NATURAL FAIR COVER
                               0.20 1.00 79
                   D
                         2.90
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 17.30 SUBAREA RUNOFF(CFS) = 20.73
 EFFECTIVE AREA(ACRES) = 3997.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 4066.30 PEAK FLOW RATE(CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
 FLOW PROCESS FROM NODE 826.00 TO NODE 826.00 IS CODE = 7
._____
 >>>>PEAK FLOW RATE ESTIMATOR CHANGED TO UNIT-HYDROGRAPH METHOD<
 >>>>USING TIME-OF-CONCENTRATION OF LONGEST FLOWPATH<>>>>
_____
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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.) = 2.0%; VALLEY(UNDEV.)/DESERT= 22.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.06; LAG(HR) = 0.84; Fm(INCH/HR) = 0.25; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
 3HR = 0.97; 6HR = 0.99; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 5.00 TOTAL AREA(ACRES) = 4066.30
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 826.00 = 41069.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243;Lca/L=0.6,n=.0227
 TIME OF PEAK FLOW(HR) = 16.58 RUNOFF VOLUME(AF) = 1218.83
 UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) = 3358.55
 TOTAL PEAK FLOW RATE(CFS) = 3358.55 (SOURCE FLOW INCLUDED)
 RATIONAL METHOD PEAK FLOW RATE(CFS) = 4723.72
  (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4723.72)
 PEAK FLOW RATE (CFS) USED = 4723.72
*******************
 FLOW PROCESS FROM NODE 826.00 TO NODE 826.00 IS CODE = 11
______
 >>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<
______
 ** MAIN STREAM CONFLUENCE DATA **
 PEAK FLOW RATE (CFS) = 4723.72 Tc (MIN.) = 63.32
 AREA-AVERAGED Fm(INCH/HR) = 0.25 Ybar = 0.40
 TOTAL AREA(ACRES) = 4066.30
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 826.00 = 41069.00 FEET.
 ** MEMORY BANK # 1 CONFLUENCE DATA **
  STREAM Q Tc Intensity Fp(Fm) Ap Ae HEADWATER
  NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
    1 816.25 38.49 1.925 0.25(0.25) 0.99 540.4 800.00
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 826.00 = 8890.00 FEET.
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 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.) = 2.0%; VALLEY(UNDEV.)/DESERT= 22.0%
       MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.06; LAG(HR) = 0.84; Fm(INCH/HR) = 0.25; Ybar = 0.41
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 5.00 TOTAL AREA(ACRES) = 4606.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 826.00 = 41069.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243; Lca/L=0.6,n=.0227
 TIME OF PEAK FLOW(HR) = 16.58 RUNOFF VOLUME(AF) = 1367.27
 PEAK FLOW RATE(CFS) = 3710.57
   (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4723.72)
 PEAK FLOW RATE (CFS) USED = 4723.72
*******************
 FLOW PROCESS FROM NODE 826.00 TO NODE 826.00 IS CODE = 12
______
 >>>>CLEAR MEMORY BANK # 1 <<<<<
_____
FLOW PROCESS FROM NODE 826.00 TO NODE 847.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
```

```
ELEVATION DATA: UPSTREAM(FEET) = 176.00 DOWNSTREAM(FEET) = 175.00 CHANNEL LENGTH THRU SUBAREA(FEET) = 170.00 CHANNEL SLOPE = 0.0059
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4723.72
 FLOW VELOCITY (FEET/SEC.) = 10.13 FLOW DEPTH (FEET) = 4.92
 TRAVEL TIME (MIN.) = 0.28 Tc (MIN.) = 63.60
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 847.00 = 41239.00 FEET.
******************
FLOW PROCESS FROM NODE 826.00 TO NODE 847.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 63.60
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.443
 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
                            0.20
                                    0.40
                                            1.00 46
 NATURAL FAIR COVER
 "WOODLAND"
                    A 0.10 0.40 1.00 36
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.30 0.20 1.00 83
                     D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 0.60
 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.) = 2.0%; VALLEY(UNDEV.) / DESERT= 22.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.25; Ybar = 0.41
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 5.00 TOTAL AREA(ACRES) = 4607.30
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 847.00 = 41239.00 FEET.
 EQUIVALENT BASIN FACTOR APPROXIMATIONS:
 Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243; Lca/L=0.6,n=.0227
 TIME OF PEAK FLOW(HR) = 16.58 RUNOFF VOLUME(AF) = 1367.40
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3703.43
 TOTAL AREA (ACRES) = 4607.30 PEAK FLOW RATE (CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 847.00 TO NODE 847.00 IS CODE = 1
______
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE <<<
______
 TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 PEAK FLOW RATE (CFS) = 4723.72 Tc (MIN.) = 63.60
 AREA-AVERAGED Fm(INCH/HR) = 0.25 Ybar = 0.41
 TOTAL AREA(ACRES) = 4607.30
************
FLOW PROCESS FROM NODE 830.00 TO NODE 831.00 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) = 895.00 DOWNSTREAM(FEET) = 820.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.606
```

```
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.277
 SUBAREA To AND LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                        Ap SCS Tc
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 NATURAL FAIR COVER
 "GRASS"
                          0.10
                                 0.25
                                        1.00 79 9.61
 NATURAL FAIR COVER
                    C 0.30 0.25 1.00 77 9.61
 "OPEN BRUSH"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF(CFS) = 1.45
 TOTAL AREA(ACRES) = 0.40 PEAK FLOW RATE(CFS) = 1.45
*****
 FLOW PROCESS FROM NODE 831.00 TO NODE 832.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>
ELEVATION DATA: UPSTREAM(FEET) = 820.00 DOWNSTREAM(FEET) = 790.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 150.00 CHANNEL SLOPE = 0.2000
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1.45
 FLOW VELOCITY (FEET/SEC.) = 5.08 FLOW DEPTH (FEET) = 0.23
 TRAVEL TIME (MIN.) = 0.49 Tc (MIN.) = 10.10

LONGEST FLOWPATH FROM NODE 830.00 TO NODE 832.00 = 477.00 FEET.
******************
 FLOW PROCESS FROM NODE 831.00 TO NODE 832.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 10.10
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.140
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                   C 0.50
                                 0.25 1.00 79
 "GRASS"
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C 0.30 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) = 0.80 SUBAREA RUNOFF(CFS) = 2.80
 EFFECTIVE AREA(ACRES) = 1.20 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 1.20
                          PEAK FLOW RATE(CFS) =
*******************
 FLOW PROCESS FROM NODE 832.00 TO NODE 833.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 790.00 DOWNSTREAM(FEET) = 762.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 200.00 CHANNEL SLOPE = 0.1400
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4.20
 FLOW VELOCITY (FEET/SEC.) = 6.11 FLOW DEPTH (FEET) = 0.47
 TRAVEL TIME (MIN.) = 0.55 Tc (MIN.) = 10.64
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 833.00 = 677.00 FEET.
 FLOW PROCESS FROM NODE 832.00 TO NODE 833.00 IS CODE = 81
______
```

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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 10.64
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.031
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                        Ар
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                         0.40 0.25 1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 0.80 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) = 1.20 SUBAREA RUNOFF(CFS) = 4.08
 EFFECTIVE AREA(ACRES) = 2.40 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 2.40 PEAK FLOW RATE(CFS) =
                                              8 17
*****
FLOW PROCESS FROM NODE 833.00 TO NODE 834.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 762.00 DOWNSTREAM(FEET) = 754.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 124.00 CHANNEL SLOPE = 0.0645
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 8.17
 FLOW VELOCITY (FEET/SEC.) = 5.54 FLOW DEPTH (FEET) = 0.81
 TRAVEL TIME (MIN.) = 0.37 Tc (MIN.) = 11.02
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 834.00 = 801.00 FEET.
*******************
FLOW PROCESS FROM NODE 833.00 TO NODE 834.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 11.02
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.957
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                        Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "GRASS"
                           0.70
                                  0.25
                                          1.00
                                               79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           1.10
                                0.25
                                        1.00
                                              77
 NATURAL FAIR COVER
 "GRASS"
                                       1.00
                   D
                          0.10 0.20
                                               84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D
                         0.40 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) = 2.30 SUBAREA RUNOFF (CFS) = 7.70
 EFFECTIVE AREA(ACRES) = 4.70 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 4.70 PEAK FLOW RATE (CFS) =
*******************
FLOW PROCESS FROM NODE 834.00 TO NODE 835.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 754.00 DOWNSTREAM(FEET) = 740.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 550.00 CHANNEL SLOPE = 0.0255
 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) = 15.70
 FLOW VELOCITY (FEET/SEC.) = 4.54 FLOW DEPTH (FEET) = 1.11
 TRAVEL TIME (MIN.) = 2.02 Tc (MIN.) = 13.03
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 835.00 = 1351.00 FEET.
*******************
 FLOW PROCESS FROM NODE 834.00 TO NODE 835.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE TO (MIN) = 13.03
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.583
 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
                           3.30
                                    0.25
                                           1 00
                                                 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                          0.60
                                  0.25
                                          1 00 77
 NATURAL FAIR COVER
                     D 6.00
                                 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) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 10.50 SUBAREA RUNOFF(CFS) = 31.79
 EFFECTIVE AREA(ACRES) = 15.20 AREA-AVERAGED Fm(INCH/HR) = 0.23
 AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 15.20
                           PEAK FLOW RATE (CFS) =
*******************
 FLOW PROCESS FROM NODE 835.00 TO NODE 836.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 740.00 DOWNSTREAM(FEET) = 624.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 929.00 CHANNEL SLOPE = 0.1249
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 45.92
 FLOW VELOCITY (FEET/SEC.) = 10.86 FLOW DEPTH (FEET) = 1.29
 TRAVEL TIME (MIN.) = 1.43 Tc (MIN.) = 14.46 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 836.00 = 2280.00 FEET.
*****
 FLOW PROCESS FROM NODE 835.00 TO NODE 836.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 14.46
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.378
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                 Fp
                                          Ap
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                                                 79
 "GRASS"
                           0.10
                                           1.00
                     C
                                    0.25
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                           0.10
                                    0.25
                                           1 00 77
 AGRICULTURAL POOR COVER
 "FALLOW"
                     D
                            4 50
                                    0.20
                                           1.00
                                                 94
 NATURAL FAIR COVER
 "GRASS"
                     D
                          10.40
                                    0.20
                                           1.00
 NATURAL FAIR COVER
                     D
                                    0.20 1.00 83
 "OPEN BRUSH"
                            0 40
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
```

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SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 15.50 SUBAREA RUNOFF(CFS) = 44.32
 EFFECTIVE AREA(ACRES) = 30.70 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 30.70 PEAK FLOW RATE(CFS) =
                                               87.43
*****
FLOW PROCESS FROM NODE 836.00 TO NODE 837.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 624.00 DOWNSTREAM(FEET) = 592.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 417.00 CHANNEL SLOPE = 0.0767
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 87.43
 FLOW VELOCITY (FEET/SEC.) = 10.58 FLOW DEPTH (FEET) = 1.74
 TRAVEL TIME (MIN.) = 0.66 Tc (MIN.) = 15.12
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 837.00 = 2697.00 FEET.
FLOW PROCESS FROM NODE 836.00 TO NODE 837.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 15.12
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.287
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                  Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                           0.20
                                   0.25
                                               79
                                          1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.60
                                   0.25
                                          1.00
                                               77
 AGRICULTURAL POOR COVER
 "FALLOW"
                           2.30
                                   0.20
                                          1.00
 NATURAL FAIR COVER
 "GRASS"
                     D
                           5.10
                                 0.20
                                          1.00
                                                84
 NATURAL FAIR COVER
                           1.10 0.20
 "OPEN BRUSH"
                     D
                                        1 00 83
 NATURAL FAIR COVER
 "WOODLAND"
                    D
                          0.20
                                 0.20
                                        1 00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 9.50 SUBAREA RUNOFF(CFS) = 26.36
 EFFECTIVE AREA(ACRES) = 40.20 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 40.20 PEAK FLOW RATE(CFS) =
*****
 FLOW PROCESS FROM NODE 837.00 TO NODE 838.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
ELEVATION DATA: UPSTREAM(FEET) = 592.00 DOWNSTREAM(FEET) = 591.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 60.00 CHANNEL SLOPE = 0.0167
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 111.27
 FLOW VELOCITY (FEET/SEC.) = 6.40 FLOW DEPTH (FEET) = 2.93
 TRAVEL TIME (MIN.) = 0.16 Tc (MIN.) = 15.27
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 838.00 = 2757.00 FEET.
******************
 FLOW PROCESS FROM NODE 837.00 TO NODE 838.00 IS CODE = 81
```

```
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 15.27
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.269
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
    LAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                   C
                         0.30
                                0.25
                                       1.00 75
 NATURAL FAIR COVER
 "GRASS"
                        1.10
                                0.25
                                       1.00 79
                   C
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C
                        7.00
                                0.25
                                       1.00
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                   D 0.40
                                0.20
                                       1.00
 NATURAL FAIR COVER
 "GRASS"
                   D 7.50
                              0.20
                                     1 00 84
 NATURAL FAIR COVER
                  D 1.80 0.20 1.00 83
 "OPEN BRUSH"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 18.10 SUBAREA RUNOFF(CFS) = 49.62
 EFFECTIVE AREA(ACRES) = 58.30 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 58.30
                        PEAK FLOW RATE(CFS) = 160.26
*****
 FLOW PROCESS FROM NODE 837.00 TO NODE 838.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
_____
 MAINLINE Tc(MIN) = 15.27
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.269
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
                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) = 0.55
 EFFECTIVE AREA(ACRES) = 58.50 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 58.50 PEAK FLOW RATE(CFS) = 160.82
*****
 FLOW PROCESS FROM NODE 838.00 TO NODE 839.00 IS CODE = 51
______
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
ELEVATION DATA: UPSTREAM(FEET) = 591.00 DOWNSTREAM(FEET) = 526.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 973.00 CHANNEL SLOPE = 0.0668
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 160.82
 FLOW VELOCITY (FEET/SEC.) = 11.80 FLOW DEPTH (FEET) = 2.48
 TRAVEL TIME (MIN.) = 1.37 Tc (MIN.) = 16.65
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 839.00 = 3730.00 FEET.
*******************
 FLOW PROCESS FROM NODE 838.00 TO NODE 839.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 16.65
```

```
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.116
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
    LAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
                          3.00 0.20
                                         1 00
 NATURAL FAIR COVER
 "GRASS"
                     D 16.40 0.20 1.00
                                                84
 NATURAL FAIR COVER
 "WOODLAND"
                    D 0.60 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) = 20.00 SUBAREA RUNOFF(CFS) = 52.48
 EFFECTIVE AREA(ACRES) = 78.50 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 78.50 PEAK FLOW RATE(CFS) =
*******************
FLOW PROCESS FROM NODE 839.00 TO NODE 840.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
ELEVATION DATA: UPSTREAM(FEET) = 526.00 DOWNSTREAM(FEET) = 455.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1045.00 CHANNEL SLOPE = 0.0679
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 205.19
 FLOW VELOCITY (FEET/SEC.) = 12.62 FLOW DEPTH (FEET) = 2.80
 TRAVEL TIME (MIN.) = 1.38 Tc (MIN.) = 18.03
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 840.00 = 4775.00 FEET.
************************
FLOW PROCESS FROM NODE 839.00 TO NODE 840.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 18.03
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.974
 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"
                           1.00
                                   0.25
                                          1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.50
                                  0.25
                                          1.00 77
 NATURAL FAIR COVER
                     D
 "GRASS"
                          31.60
                                 0.20
                                          1.00
                                                84
 NATURAL FAIR COVER
                   D
                         1.60
 "OPEN BRUSH"
                                 0.20
                                        1.00 83
 NATURAL FAIR COVER
 "WOODLAND"
                    D
                          0.40
                                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) = 35.10 SUBAREA RUNOFF(CFS) = 87.55
 EFFECTIVE AREA(ACRES) = 113.60 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 113.60 PEAK FLOW RATE(CFS) = 282.71
*******************
 FLOW PROCESS FROM NODE 840.00 TO NODE 841.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 455.00 DOWNSTREAM(FEET) = 409.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 675.00 CHANNEL SLOPE = 0.0681
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CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 282.71
 FLOW VELOCITY (FEET/SEC.) = 13.65 FLOW DEPTH (FEET) = 2.97
 TRAVEL TIME (MIN.) = 0.82 Tc (MIN.) = 18.85
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 841.00 = 5450.00 FEET.
FLOW PROCESS FROM NODE 840.00 TO NODE 841.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC(MIN) = 18.85
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.901
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                           Ap
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                             6.00
                                    0.30
                                            1.00
                                                  86
 NATURAL FAIR COVER
 "GRASS"
                           7.40
                                    0.30
                                            1.00
                                                  69
                      В
 AGRICULTURAL POOR COVER
                           4.10
                                    0.20
                                            1.00
 NATURAL FAIR COVER
 "GRASS"
                            24.80
                                    0.20
                                          1.00
 NATURAL FAIR COVER
                         0.90
 "WOODLAND"
                     D
                                    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) = 43.20 SUBAREA RUNOFF(CFS) = 103.81
 EFFECTIVE AREA(ACRES) = 156.80 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 156.80 PEAK FLOW RATE(CFS) = 379.11
·····
 FLOW PROCESS FROM NODE 841 00 TO NODE 842 00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 409.00 DOWNSTREAM(FEET) = 405.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 142.00 CHANNEL SLOPE = 0.0282
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 379.11
 FLOW VELOCITY (FEET/SEC.) = 10.56 FLOW DEPTH (FEET) = 3.99
 TRAVEL TIME (MIN.) = 0.22 Tc (MIN.) = 19.08
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 842.00 = 5592.00 FEET.
******************
 FLOW PROCESS FROM NODE 841.00 TO NODE 842.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 19.08
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.881
 SUBAREA LOSS RATE DATA(AMC II):
                                  Fp
                   SCS SOIL AREA
 DEVELOPMENT TYPE/
                                            Ap
                                                  SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                             0.10
                                    0.25
                      C
                                            1.00
                                                  7.5
 NATURAL FAIR COVER
 "GRASS"
                      C
                             7.90
                                    0.25
                                            1.00
                                                  79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      С
                            26.10
                                    0.25
                                            1.00
                                                  77
 NATURAL FAIR COVER
 "GRASS"
                      D
                            19.30
                                    0.20
                                            1.00 84
```

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NATURAL FAIR COVER
                          2.10 0.20 1.00 83
  'OPEN BRUSH"
 NATURAL FAIR COVER
 "WOODLAND"
                    D
                          0.90 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) = 56.40
                          SUBAREA RUNOFF(CFS) = 134.57
 EFFECTIVE AREA(ACRES) = 213.20 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 213.20
                        PEAK FLOW RATE(CFS) =
                                              510 89
********************
 FLOW PROCESS FROM NODE 842.00 TO NODE 843.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 405.00 DOWNSTREAM(FEET) = 348.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 2041.00 CHANNEL SLOPE = 0.0279
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 510.89
 FLOW VELOCITY (FEET/SEC.) = 11.36 FLOW DEPTH (FEET) = 4.66
 TRAVEL TIME (MIN.) = 2.99 Tc (MIN.) = 22.07
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 843.00 = 7633.00 FEET.
******************
 FLOW PROCESS FROM NODE 842.00 TO NODE 843.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 22.07
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.643
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fp
                                         Aρ
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                            0.60
                                   0.30
                                           1.00
                                                 86
 NATURAL FAIR COVER
 "GRASS"
                           2.80
                                   0.30
                                           1.00
                                                 69
 NATURAL FAIR COVER
 "GRASS"
                           10.20
                                                79
                     C
                                   0.25
                                           1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           17.70
                                   0.25
                                           1.00
                                                 77
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.30
                                   0.20
                                           1 00
 AGRICULTURAL POOR COVER
 "FALLOW"
                     D
                           0.80
                                   0.20
                                         1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 32.40 SUBAREA RUNOFF(CFS) = 69.67
 EFFECTIVE AREA(ACRES) = 245.60 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 245.60
                         PEAK FLOW RATE(CFS) =
******************
 FLOW PROCESS FROM NODE 842.00 TO NODE 843.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 22.07
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.643
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                  Fρ
                                         Aр
                                                SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                           78.70
                                   0.20
                                           1.00 84
```

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NATURAL FAIR COVER
                          0.70 0.20 1.00 83
 "OPEN BRUSH"
                    D
 NATURAL FAIR COVER
 "WOODLAND"
                   D
                          2.00 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) = 81.40 SUBAREA RUNOFF(CFS) = 178.95
 EFFECTIVE AREA(ACRES) = 327.00 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 327.00 PEAK FLOW RATE (CFS) = 713.72
*******************
 FLOW PROCESS FROM NODE 843.00 TO NODE 844.00 IS CODE = 51
._____
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <
______
 ELEVATION DATA: UPSTREAM(FEET) = 348.00 DOWNSTREAM(FEET) = 302.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1986.00 CHANNEL SLOPE = 0.0232
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 713.72
 FLOW VELOCITY (FEET/SEC.) = 11.51 FLOW DEPTH (FEET) = 5.43
 TRAVEL TIME (MIN.) = 2.88 Tc (MIN.) = 24.95
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 844.00 = 9619.00 FEET.
********************
 FLOW PROCESS FROM NODE 843.00 TO NODE 844.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
______
 MAINLINE Tc (MIN) = 24.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.463
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                        Ap SCS
                                  Fρ
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                    C
                          0.40
                                   0.25
                                          1.00
                                                75
 NATURAL FAIR COVER
                         10.70
 "GRASS"
                    C
                                   0.25
                                          1.00
                                                79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         23.90
                                   0.25
                                          1.00
                                                77
                    C
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                    D
                          0.30
                                   0.20
                                          1.00
                                                81
 NATURAL FAIR COVER
 "GRASS"
                         55.10
                                  0.20
                                          1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    D
                          9.40
                                 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) = 99.80 SUBAREA RUNOFF(CFS) = 201.71
 EFFECTIVE AREA(ACRES) = 426.80 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 426.80
                          PEAK FLOW RATE(CFS) =
                                              862.61
******************
 FLOW PROCESS FROM NODE 843.00 TO NODE 844.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE TO (MIN) = 24.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.463
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                  Fρ
                                        Ap SCS
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND"
                     D
                           1.70
                                   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) = 1.70 SUBAREA RUNOFF(CFS) = 3.46
 EFFECTIVE AREA(ACRES) = 428.50 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 428.50 PEAK FLOW RATE(CFS) =
*******************
 FLOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 302.00 DOWNSTREAM(FEET) = 273.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1696.00 CHANNEL SLOPE = 0.0171
 CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 866.07
 FLOW VELOCITY (FEET/SEC.) = 10.78 FLOW DEPTH (FEET) = 6.12
 TRAVEL TIME (MIN.) = 2.62 Tc (MIN.) = 27.57
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 845.00 = 11315.00 FEET.
*****
 FLOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 27.57
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.327
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                        Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                                  0.25
                    C
                           0 40
                                          1 00
                                              75
 NATURAL FAIR COVER
                           4 90
                                  0.25
                                          1.00
                                              79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           4.10
                                  0.25
                                          1.00
                                              77
 AGRICULTURAL POOR COVER
 "FALLOW"
                          10.10
                                 0.20
                                         1.00 94
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                         0.40
                                0.20
                  D
                                        1.00 81
 NATURAL FAIR COVER
 "GRASS"
                    D
                          35.60
                                 0.20
                                        1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 55.50 SUBAREA RUNOFF(CFS) = 105.82
 EFFECTIVE AREA(ACRES) = 484.00 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 484.00 PEAK FLOW RATE(CFS) =
*******************
 FLOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 27.57
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.327
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                        Аp
                                               SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D
                         3.80
                                0.20
                                        1.00
 NATURAL FAIR COVER
                     D 2.00
                                0.20 1.00 79
 "WOODLAND"
 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) = 5.80 SUBAREA RUNOFF(CFS) = 11.10
EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45
FLOW PROCESS FROM NODE 845.00 TO NODE 846.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 273.00 DOWNSTREAM(FEET) = 240.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1458.00 CHANNEL SLOPE = 0.0226
 CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 930.45
 FLOW VELOCITY (FEET/SEC.) = 12.18 FLOW DEPTH (FEET) = 5.92
 TRAVEL TIME (MIN.) = 2.00 Tc (MIN.) = 29.56
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 846.00 = 12773.00 FEET.
*****
 FLOW PROCESS FROM NODE 845.00 TO NODE 846.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
 MAINLINE Tc (MIN) = 29.56
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.239
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fρ
                                         Ap SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                           2 20
                                   0.30
                                           1.00 86
 NATURAL FAIR COVER
 "GRASS"
                          1.00
                                 0.30
                                           1.00 69
                     B
 NATURAL FAIR COVER
                          1.10
 "WOODI.AND"
                                   0.30
                                           1 00 60
 NATURAL FAIR COVER
 "GRASS"
                   C 8.00
                                   0.25
                                          1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C
                          1.10
                                 0.25
                                         1.00 77
 AGRICULTURAL POOR COVER
 "FALLOW"
                          7.60
                                 0.20 1.00 94
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 21.00 SUBAREA RUNOFF(CFS) = 37.74
 EFFECTIVE AREA(ACRES) = 510.80 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 510.80 PEAK FLOW RATE(CFS) = 930.45
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****
 FLOW PROCESS FROM NODE 845.00 TO NODE 846.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 29.56
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.239
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                 Fp
                                        Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
  LAND USE
 NATURAL FAIR COVER
 "GRASS"
                     D
                         15.90
                                   0.20
                                           1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     D
                          6.10
                                 0.20
                                         1.00 83
 NATURAL FAIR COVER
                     D 0.20 0.20 1.00 79
 "WOODI.AND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
```

```
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 22.20 SUBAREA RUNOFF(CFS) = 40.74
 EFFECTIVE AREA(ACRES) = 533.00 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 533.00 PEAK FLOW RATE(CFS) =
                                             970.23
*****
FLOW PROCESS FROM NODE 846.00 TO NODE 847.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 240.00 DOWNSTREAM(FEET) = 175.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1949.00 CHANNEL SLOPE = 0.0334
 CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 970.23
 FLOW VELOCITY (FEET/SEC.) = 14.23 FLOW DEPTH (FEET) = 5.47
 TRAVEL TIME (MIN.) = 2.28 Tc (MIN.) = 31.85
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 847.00 = 14722.00 FEET.
FLOW PROCESS FROM NODE 846.00 TO NODE 847.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 31.85
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.150
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                       An SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                          6.50
                                 0.30
                                         1.00
                                               86
 NATURAL FAIR COVER
 "GRASS"
                          2.30
                                 0.30
                                         1.00
                                               69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          2.00
                                 0.30
                                        1.00
 NATURAL FAIR COVER
 "WOODLAND"
                          0.60 0.30
                                        1.00
                                               60
 AGRICULTURAL POOR COVER
                         3.50 0.25
 "FALLOW"
                                       1 00 91
 NATURAL FAIR COVER
 "GRASS"
                   С
                          2.00
                                0.25
                                       1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 16.90 SUBAREA RUNOFF(CFS) = 28.38
 EFFECTIVE AREA(ACRES) = 549.90 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 549.90 PEAK FLOW RATE(CFS) = 970.23
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
********************
 FLOW PROCESS FROM NODE 846.00 TO NODE 847.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 31.85
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.150
 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"
                          5.50
                                  0.25
                                         1.00 77
 AGRICULTURAL POOR COVER
                          3.60
 "FALLOW"
                                 0.20
                                         1.00 94
 NATURAL FAIR COVER
 "GRASS"
                          13.20
                                 0.20
                                         1.00 84
```

```
NATURAL FAIR COVER
                            3.40 0.20 1.00 83
                     D
  'OPEN BRUSH"
 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) = 25.90 SUBAREA RUNOFF(CFS) = 45.20
 EFFECTIVE AREA(ACRES) = 575.80 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 575.80 PEAK FLOW RATE (CFS) = 1000.96
*******************
 FLOW PROCESS FROM NODE 847.00 TO NODE 847.00 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.) = 31.85
 RAINFALL INTENSITY (INCH/HR) = 2.15
 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp (INCH/HR) = 0.22
 AREA-AVERAGED Ap = 1.00
 EFFECTIVE STREAM AREA(ACRES) = 575.80
 TOTAL STREAM AREA(ACRES) = 575.80
 PEAK FLOW RATE(CFS) AT CONFLUENCE = 1000.96
 ** CONFLUENCE DATA **
 STREAM O TC
                       AREA
                             HEADWATER
       (CFS) (MIN.) (ACRES)
 NUMBER
                               NODE
        4723.72 63.60
   1
                       4607.30
                                  3100.00
         1000.96 31.85
                        575.80
                                   830 00
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 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.) = 2.0%; VALLEY(UNDEV.)/DESERT= 22.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 5.00 TOTAL AREA(ACRES) = 5183.10
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 847.00 = 41239.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0295; Lca/L=0.4, n=.0265; Lca/L=0.5, n=.0243; Lca/L=0.6, n=.0227
 TIME OF PEAK FLOW(HR) = 16.58 RUNOFF VOLUME(AF) = 1548.02
 PEAK FLOW RATE(CFS) = 4111.76
   (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4723.72)
 PEAK FLOW RATE (CFS) USED = 4723.72
FLOW PROCESS FROM NODE 847.00 TO NODE 865.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 175.00 DOWNSTREAM(FEET) = 154.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 6117.00 CHANNEL SLOPE = 0.0034
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4723.72
 FLOW VELOCITY (FEET/SEC.) = 8.50 FLOW DEPTH (FEET) = 5.76
 TRAVEL TIME (MIN.) = 11.99 Tc (MIN.) = 75.59
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 865.00 = 47356.00 FEET.
******************
```

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FLOW PROCESS FROM NODE 847.00 TO NODE 865.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 75.59
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.304
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                     SCS SOIL AREA
                                    Fp
                                              Аp
    LAND USE
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                              1.70
                                       0.40
                                                1 00
                                                       50
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                       Ά
                              15.60
                                      0.40
                                               1.00
                                                     44
 NATURAL FAIR COVER
 "OPEN BRUSH"
                       A
                             3.10
                                       0.40
                                               1.00
                                                       46
 COMMERCIAL
                       A
                              0.60
                                       0.40
                                                0.10
                                                       32
 NATURAL FAIR COVER
 "WOODLAND"
                           14.10
                                     0.40
                                              1 00
                                                       36
 AGRICULTURAL POOR COVER
 "FALLOW"
                       B
                             2.90 0.30 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.39
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 38.00
 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.) = 2.0%; VALLEY(UNDEV.) / DESERT = 22.0%
       MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.25; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5221.10
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 865.00 = 47356.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
 Lca/L=0.3, n=.0309; Lca/L=0.4, n=.0277; Lca/L=0.5, n=.0255; Lca/L=0.6, n=.0238
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1551.54
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3582.49
 TOTAL AREA (ACRES) = 5221.10 PEAK FLOW RATE (CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
 FLOW PROCESS FROM NODE 847.00 TO NODE 865.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 75.59
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.304
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                      Fp
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                              16.50
                                       0.30
                                                0.50
 NATURAL FAIR COVER
 "GRASS"
                       В
                             1.80
                                     0.30
                                               1.00
                                                      69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                              22.10
                                     0.30
                                               1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                       В
                             1.10 0.30
                                              1.00
                                                       66
 COMMERCIAL
                              0.80 0.30
                                             0.10
                       B
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" B
                             12.30
                                     0.30 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.84
 SUBAREA AREA(ACRES) = 54.60
 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.) = 2.0%; VALLEY(UNDEV.)/DESERT= 22.0%
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MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.)= 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.25; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5275.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 865.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255; Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1564.73
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3613.03
 TOTAL AREA (ACRES) = 5275.70
                             PEAK FLOW RATE(CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 847.00 TO NODE 865.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE TO (MIN) = 75.59
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.304
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                    SCS SOIL AREA
                                     Fp
                                              Ap
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 PUBLIC PARK
                      В
                             0.40
                                      0.30
                                              0.85
                                                     56
 NATURAL FAIR COVER
 "WOODI.AND"
                             4.50
                                              1.00
                      B
                                      0.30
                                                     60
 NATURAL FAIR COVER
 "GRASS"
                      C
                           91 40
                                      0.25
                                              1 00
                                                     79
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                       C
                              4 20
                                      0.25
                                              1.00
 NATURAL FAIR COVER
                       С
                              5.70
                                    0.25
                                              1.00
                                                     77
 "OPEN BRUSH"
                                    0.25
 COMMERCIAL
                       С
                              2.00
                                              0.10
                                                     69
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 108.20
 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.) = 2.0%; VALLEY(UNDEV.)/DESERT= 22.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.25; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5383.90
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 865.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255; Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1595.40
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3676.35
 TOTAL AREA(ACRES) = 5383.90 PEAK FLOW RATE(CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****************
 FLOW PROCESS FROM NODE 847.00 TO NODE 865.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
______
 MAINLINE To (MIN) = 75.59
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.304
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                    SCS SOTE AREA
                                     Fp
                                              Αp
                                                   SCS
     LAND USE
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 PUBLIC PARK
                      C
                             0.70
                                    0.25
                                            0.85 69
 NATURAL FAIR COVER
 "WOODLAND"
                       C
                             10.50
                                      0.25
                                              1.00 73
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AGRICULTURAL POOR COVER
                                21.70
                                         0.20
                                                 1.00 94
  "FALLOW"
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                                32.20
                                         0.20
                                                  0.50
 NATURAL FAIR COVER
                                23.40
                                         0.20
                                                  1.00
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                         D
                               2.50 0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.82
 SUBAREA AREA(ACRES) = 91.00
 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.) = 2.0%; VALLEY(UNDEV.) / DESERT = 22.0%
         MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL (MIN) = 10.00 TOTAL AREA (ACRES) = 5474.90
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 865.00 = 47356.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255; Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1626.46
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3735.80
 TOTAL AREA(ACRES) = 5474.90
                             PEAK FLOW RATE (CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
FLOW PROCESS FROM NODE 847.00 TO NODE 865.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 75.59
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.304
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                                Αp
                                                        SCS
    LAND USE
                      GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                               13.30
 "OPEN BRUSH"
                         D
                                         0.20
                                                  1.00
                                                          83
 COMMERCIAL
                               1.40
                         D
                                       0.20
                                                0.10
                                                          75
 AGRICULTURAL FAIR COVER
                    D
 "PASTURE, DRYLAND"
                                3.30
                                       0.20
                                                  1.00
                                                          84
 NATURAL FAIR COVER
 "WOODT.AND"
                         D
                               23.10
                                       0.20
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.97
 SUBAREA AREA(ACRES) = 41.10
 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.) = 2.0%; VALLEY(UNDEV.) / DESERT = 22.0%
         MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.)= 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5516.00
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 865.00 = 47356.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0309; Lca/L=0.4, n=.0277; Lca/L=0.5, n=.0255; Lca/L=0.6, n=.0238
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1639.11
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3761.27
 TOTAL AREA(ACRES) = 5516.00
                             PEAK FLOW RATE (CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
********************
 FLOW PROCESS FROM NODE 865.00 TO NODE 865.00 IS CODE = 1
```

```
>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE
______
 TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 PEAK FLOW RATE (CFS) = 4723.72 Tc (MIN.) = 75.59
 AREA-AVERAGED Fm(INCH/HR) = 0.24 Ybar = 0.40
 TOTAL AREA(ACRES) = 5516.00
*******************
FLOW PROCESS FROM NODE 850.00 TO NODE 851.00 IS CODE = 21
______
 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
.-----
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 328.00
 ELEVATION DATA: UPSTREAM(FEET) = 718.00 DOWNSTREAM(FEET) = 600.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 5.000
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 6.190
 SUBAREA To AND LOSS RATE DATA (AMC II):
                                      Ap SCS Tc
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
    LAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 0.80 0.20 0.50 75 5.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA RUNOFF(CFS) = 4.38
 TOTAL AREA(ACRES) =
                0.80 PEAK FLOW RATE(CFS) =
                                        4.38
******************
 FLOW PROCESS FROM NODE 851.00 TO NODE 852.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 600.00 DOWNSTREAM(FEET) = 560.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 144.00 CHANNEL SLOPE = 0.2778
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4.38
 FLOW VELOCITY(FEET/SEC.) = 7.99 FLOW DEPTH(FEET) = 0.39
 *****
 FLOW PROCESS FROM NODE 851.00 TO NODE 852.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
MAINLINE Tc (MIN) = 5.30
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 6.035
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                     αA
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                 D
                               0.20 0.50 75
                        1.10
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 5.88
 EFFECTIVE AREA(ACRES) = 1.90 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.50
 TOTAL AREA(ACRES) = 1.90 PEAK FLOW RATE(CFS) =
                                            10.15
******************
 FLOW PROCESS FROM NODE 852.00 TO NODE 853.00 IS CODE = 51
```

```
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 560.00 DOWNSTREAM(FEET) = 540.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 100.00 CHANNEL SLOPE = 0.2000
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 10.15
 FLOW VELOCITY (FEET/SEC.) = 8.85 FLOW DEPTH (FEET) = 0.68
 TRAVEL TIME (MIN.) = 0.19 Tc (MIN.) = 5.49
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 853.00 = 572.00 FEET.
*******************
 FLOW PROCESS FROM NODE 852.00 TO NODE 853.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 5.49
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 5.938
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fo
                                      Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                  D 1.30 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA AREA(ACRES) = 1.30 SUBAREA RUNOFF(CFS) = 6.83
 EFFECTIVE AREA(ACRES) = 3.20 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.50
 TOTAL AREA(ACRES) = 3.20 PEAK FLOW RATE(CFS) =
*****
 FLOW PROCESS FROM NODE 853.00 TO NODE 854.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 540.00 DOWNSTREAM(FEET) = 510.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 115.00 CHANNEL SLOPE = 0.2609
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 16.81
 FLOW VELOCITY (FEET/SEC.) = 11.13 FLOW DEPTH (FEET) = 0.83
 TRAVEL TIME (MIN.) = 0.17 Tc (MIN.) = 5.66
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 854.00 = 687.00 FEET.
FLOW PROCESS FROM NODE 853.00 TO NODE 854.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 5.66
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.849
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 2.40 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA AREA(ACRES) = 2.40 SUBAREA RUNOFF(CFS) = 12.42
 EFFECTIVE AREA(ACRES) = 5.60 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.50
 TOTAL AREA(ACRES) = 5.60 PEAK FLOW RATE(CFS) =
******************
```

```
FLOW PROCESS FROM NODE 854.00 TO NODE 855.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 510.00 DOWNSTREAM(FEET) = 468.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 167.00 CHANNEL SLOPE = 0.2515
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 28.97
 FLOW VELOCITY (FEET/SEC.) = 12.36 FLOW DEPTH (FEET) = 0.83
 TRAVEL TIME (MIN.) = 0.23 Tc (MIN.) = 5.89
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 855.00 = 854.00 FEET.
FLOW PROCESS FROM NODE 854.00 TO NODE 855.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 5.89
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.733
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                       Ap SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 2.80 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA AREA(ACRES) = 2.80 SUBAREA RUNOFF(CFS) = 14.19
 EFFECTIVE AREA(ACRES) = 8.40 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.50
 TOTAL AREA(ACRES) = 8.40 PEAK FLOW RATE(CFS) =
******************
 FLOW PROCESS FROM NODE 855.00 TO NODE 856.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 468.00 DOWNSTREAM(FEET) = 445.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 115.00 CHANNEL SLOPE = 0.2000
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                          42.58
 FLOW VELOCITY (FEET/SEC.) = 12.67 FLOW DEPTH (FEET) = 1.09
 TRAVEL TIME (MIN.) = 0.15 Tc (MIN.) = 6.04
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 856.00 = 969.00 FEET.
***********************
 FLOW PROCESS FROM NODE 855.00 TO NODE 856.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 6.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 5.655
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
                                        1.00 94
 "FAT.T.OW"
                    D
                         0.40
                                0.20
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                   D 3.10
                                0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.56
 SUBAREA AREA(ACRES) = 3.50 SUBAREA RUNOFF(CFS) = 17.46
 EFFECTIVE AREA(ACRES) = 11.90 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.52
```

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11.90
 TOTAL AREA(ACRES) =
                       PEAK FLOW RATE(CFS) =
                                             59.45
*****************
FLOW PROCESS FROM NODE 856.00 TO NODE 857.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 445.00 DOWNSTREAM(FEET) = 366.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 423.00 CHANNEL SLOPE = 0.1868
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 59.45
 FLOW VELOCITY (FEET/SEC.) = 13.42 FLOW DEPTH (FEET) = 1.33
 TRAVEL TIME (MIN.) = 0.53 Tc (MIN.) = 6.56
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 857.00 = 1392.00 FEET.
*******************
 FLOW PROCESS FROM NODE 856.00 TO NODE 857.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 6.56
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.384
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                      Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                                      1.00 94
                   D
                        2.30 0.20
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D
                          1.00 0.20
                                      0.50 75
 NATURAL FAIR COVER
                   D
                          1.30
                               0.20 1.00
 "GRASS"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA(ACRES) = 4.60 SUBAREA RUNOFF(CFS) = 21.55
 EFFECTIVE AREA(ACRES) = 16.50 AREA-AVERAGED Fm(INCH/HR) = 0.12
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.62
 TOTAL AREA(ACRES) = 16.50 PEAK FLOW RATE(CFS) =
*******************
 FLOW PROCESS FROM NODE 857.00 TO NODE 858.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 366.00 DOWNSTREAM(FEET) = 300.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 574.00 CHANNEL SLOPE = 0.1150
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 78.10
 FLOW VELOCITY (FEET/SEC.) = 12.05 FLOW DEPTH (FEET) = 1.73
 TRAVEL TIME (MIN.) = 0.79 Tc (MIN.) = 7.36
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 858.00 = 1966.00 FEET.
*****
FLOW PROCESS FROM NODE 857.00 TO NODE 858.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 7.36
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.974
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                               Fp Ap
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                                        1.00 69
                          0.20
                                 0.30
```

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AGRICULTURAL POOR COVER
                            0.50
                                 0.20
                                         1.00 94
  'FAI.I.OW"
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                           0.10
                                 0.20
                                         0.50 75
 NATURAL FAIR COVER
                           2.80 0.20 1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 3.60 SUBAREA RUNOFF(CFS) = 15.46
 EFFECTIVE AREA(ACRES) = 20.10 AREA-AVERAGED Fm(INCH/HR) = 0.14
 AREA-AVERAGED Fp (INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.69
 TOTAL AREA(ACRES) = 20.10 PEAK FLOW RATE(CFS) = 87.48
*****
 FLOW PROCESS FROM NODE 858.00 TO NODE 859.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 300.00 DOWNSTREAM(FEET) = 276.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 341.00 CHANNEL SLOPE = 0.0704
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 87.48
 FLOW VELOCITY (FEET/SEC.) = 10.26 FLOW DEPTH (FEET) = 1.78
 TRAVEL TIME (MIN.) = 0.55 Tc (MIN.) = 7.91
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 859.00 = 2307.00 FEET.
*******************
 FLOW PROCESS FROM NODE 858.00 TO NODE 859.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 7.91
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.779
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                          Аp
                                 Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                           1.10
                                    0.30
                                           1.00 69
                     В
 AGRICULTURAL POOR COVER
 "FALLOW"
                                           1.00
                     D
                           1.10
                                    0.20
                                                 94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                     D
                           9.10
                                   0.20
                                           0.50
 NATURAL FAIR COVER
 "GRASS"
                     D
                           4.00
                                  0.20
                                         1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.70
 SUBAREA AREA(ACRES) = 15.30 SUBAREA RUNOFF(CFS) = 63.77
 EFFECTIVE AREA(ACRES) = 35.40 AREA-AVERAGED Fm(INCH/HR) = 0.14
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.69
 TOTAL AREA(ACRES) = 35.40
                           PEAK FLOW RATE(CFS) = 147.71
*******************
 FLOW PROCESS FROM NODE 859.00 TO NODE 860.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 276.00 DOWNSTREAM(FEET) = 240.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 795.00 CHANNEL SLOPE = 0.0453
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 147.71
 FLOW VELOCITY (FEET/SEC.) = 9.98 FLOW DEPTH (FEET) = 2.63
 TRAVEL TIME (MIN.) = 1.33 Tc (MIN.) = 9.24
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 860.00 = 3102.00 FEET.
```

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*******************
FLOW PROCESS FROM NODE 859.00 TO NODE 860.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
______
 MAINLINE Tc (MIN) = 9.24
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.386
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                  SCS SOTT. AREA
                                Fp
                                        Ap
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           3.00
                                   0.30
                                          1.00
 NATURAL FAIR COVER
 "GRASS"
                           3.20
                                   0.30
                                          1.00
 AGRICULTURAL POOR COVER
 "FALLOW"
                           3.60
                                   0.20
                                          1.00
                                                94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                     D
                                               75
                          3.40
                                 0.20
                                        0.50
 NATURAL FAIR COVER
 "GRASS"
                        12.60 0.20 1.00 84
                     D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
 SUBAREA AREA(ACRES) = 25.80 SUBAREA RUNOFF(CFS) = 96.94
 EFFECTIVE AREA(ACRES) = 61.20 AREA-AVERAGED Fm(INCH/HR) = 0.17
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.79
 TOTAL AREA (ACRES) = 61.20 PEAK FLOW RATE (CFS) = 232.13
***********************
 FLOW PROCESS FROM NODE 860.00 TO NODE 861.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 240.00 DOWNSTREAM(FEET) = 206.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 777.00 CHANNEL SLOPE = 0.0438
 CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 232.13
 FLOW VELOCITY (FEET/SEC.) = 11.01 FLOW DEPTH (FEET) = 3.01
 TRAVEL TIME (MIN.) = 1.18 Tc (MIN.) = 10.41
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 861.00 = 3879.00 FEET.
*******************
 FLOW PROCESS FROM NODE 860.00 TO NODE 861.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 10.41
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.077
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fo
                                        Ap SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                           3.50
                                   0.30
                                          1.00
 NATURAL FAIR COVER
 "GRASS"
                           0.50
                                 0.30
                     B
                                          1.00
                                                69
 AGRICULTURAL POOR COVER
 "FALLOW"
                           1.40
                                 0.20
                     D
                                        1 00
                                                94
 NATURAL FAIR COVER
                          0.70 0.20 1.00 84
 "GRASS"
                     D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 6.10 SUBAREA RUNOFF(CFS) = 20.93
 EFFECTIVE AREA(ACRES) = 67.30 AREA-AVERAGED Fm(INCH/HR) = 0.18
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.81
 TOTAL AREA(ACRES) = 67.30 PEAK FLOW RATE(CFS) = 236.06
```

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***********************
 FLOW PROCESS FROM NODE 861.00 TO NODE 862.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 206.00 DOWNSTREAM(FEET) = 193.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 579.00 CHANNEL SLOPE = 0.0225
 CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 236.06
 FLOW VELOCITY (FEET/SEC.) = 8.63 FLOW DEPTH (FEET) = 3.60
 TRAVEL TIME (MIN.) = 1.12 Tc (MIN.) = 11.53
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 862.00 = 4458.00 FEET.
*******************
 FLOW PROCESS FROM NODE 861.00 TO NODE 862.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE TC(MIN) = 11.53
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.854
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
                                          Ap
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                    В
                          4.70
                                0.30
                                         1.00 86
 NATURAL FAIR COVER
 "GRASS"
                          1.20
                                0.30
                                         1.00 69
                    В
 AGRICULTURAL POOR COVER
 "FALLOW"
                    D
                         57.90
                                  0.20
                                          1.00 94
 NATURAL FAIR COVER
 "GRASS"
                    D
                           0.10
                                  0.20
                                         1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
                        SUBAREA RUNOFF(CFS) = 209.59
 SUBAREA AREA(ACRES) = 63.90
 EFFECTIVE AREA(ACRES) = 131.20 AREA-AVERAGED Fm(INCH/HR) = 0.19
 AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.90
 TOTAL AREA(ACRES) = 131.20
                           PEAK FLOW RATE(CFS) =
                                               432.11
*****************
 FLOW PROCESS FROM NODE 862.00 TO NODE 863.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 193.00 DOWNSTREAM(FEET) = 174.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1469.00 CHANNEL SLOPE = 0.0129
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 432.11
 FLOW VELOCITY (FEET/SEC.) = 8.16 FLOW DEPTH (FEET) = 4.87
 TRAVEL TIME (MIN.) = 3.00 Tc (MIN.) = 14.53
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 863.00 = 5927.00 FEET.
******************
 FLOW PROCESS FROM NODE 862.00 TO NODE 863.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 14.53
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.367
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                         Αp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL FAIR COVER
```

"PASTURE, DRYLAND" AGRICULTURAL POOR COVER	A	1.00	0.40	1.00	49
"FALLOW" NATURAL FAIR COVER	В	6.60	0.30	1.00	86
"GRASS"	В	1.70	0.30	1.00	69
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	В	37.80	0.30	1.00	69
AGRICULTURAL POOR COVER "FALLOW"	D	14.20	0.20	1.00	94
"FALLOW" NATURAL FAIR COVER "GRASS"			0.20		84
SUBAREA AVERAGE PERVIOUS				27	
SUBAREA AVERAGE PERVIOUS SUBAREA AREA(ACRES) = 6				= 186 3	37
EFFECTIVE AREA (ACRES) =	198.10	AREA-A	VERAGED Fm()	NCH/HR) =	0.22
AREA-AVERAGED Fp(INCH/HR)	= 0.24	AREA-AV	ERAGED Ap =	0.94	
TOTAL AREA(ACRES) = 19	8.10	PEAK F	LOW RATE (CFS	5) = 5	561.04
******	******	*****	******	******	*****
FLOW PROCESS FROM NODE	862.00	TO NODE	863.00 IS	CODE = 8	31
>>>>ADDITION OF SUBAREA	TO MAINI	LINE PEAK	FLOW<<<<		
MAINLINE Tc(MIN) = 14.53					
* 100 YEAR RAINFALL INTEN		CH/HR) =	3.367		
SUBAREA LOSS RATE DATA(AM					
DEVELOPMENT TYPE/ S	CS SOIL	AREA	Fp	Ap	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
URBAN FAIR COVER "TURF"	D	0.30	0.20	1 00	0.0
AGRICULTURAL FAIR COVER	D	0.30	0.20	1.00	02
"PASTURE, DRYLAND"	D	4.80	0.20	1.00	8.4
SUBAREA AVERAGE PERVIOUS					
SUBAREA AVERAGE PERVIOUS					
SUBAREA AREA(ACRES) =	5.10	SUBAREA	RUNOFF (CFS)	= 14.5	54
EFFECTIVE AREA (ACRES) =	203.20	) AREA-A	VERAGED Fm(1	INCH/HR) =	= 0.22
AREA-AVERAGED Fp(INCH/HR) TOTAL AREA(ACRES) = 20	= U.Z:	DEAK E	ERAGED AP =	0.94	575 58
TOTAL ANDA (ACNES) - 20	3.20	I DAN I	HOW IMIE (CIT	,, –	773.30
**************************************					
>>>>COMPUTE TRAPEZOIDAL >>>>TRAVELTIME THRU SUBA					
ELEVATION DATA: UPSTREAM( CHANNEL LENGTH THRU SUBAR CHANNEL BASE(FEET) = 6	EA (FEET)	= 774.	00 CHANNEI		
MANNING'S FACTOR = 0.040				00	
CHANNEL FLOW THRU SUBAREA FLOW VELOCITY (FEET/SEC.)					
FLOW VELOCITY (FEET/SEC.)	= 8.42	2 FLOW D	EPTH (FEET) =	5.79	
TRAVEL TIME(MIN.) = 1.5 LONGEST FLOWPATH FROM NOD	3 Tc(1	MIN.) = 1	6.06		00
LONGEST FLOWPATH FROM NOD	E 850	).00 TO NO	DE 864.UU	) = 6/01.	.00 FEET.
**************************************					
>>>>ADDITION OF SUBAREA					
MAINLINE TC(MIN) = 16.06 * 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA(AM	SITY(ING		3.181		
DEVELOPMENT TYPE/ S	CS SOIL	AREA	Fp	Ap	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
RESIDENTIAL	70	0 00	0.40	0 50	22
"5-7 DWELLINGS/ACRE" NATURAL FAIR COVER	A	0.20	0.40	0.50	32

"GRASS"	A	2.00	0.40	1.00	50	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	Δ	2 60	0.40	1 00	49	
RESIDENTIAL		2.00	0.10	1.00	19	
"5-7 DWELLINGS/ACRE"	В	2.40	0.30	0.50	56	
NATURAL FAIR COVER						
"GRASS"	В	6.50	0.30	1.00	69	
URBAN FAIR COVER	В	0.60	0.30	1 00	65	
SUBAREA AVERAGE PERVIOUS					63	
SUBAREA AVERAGE PERVIOUS	AREA FRA	CTION, Ap	= 0.91			
SUBAREA AREA(ACRES) = 1	4.30	SUBAREA	RUNOFF (CFS	$s_{i} = 37.$	.00	
EFFECTIVE AREA(ACRES) =	217.50	AREA-A	VERAGED Fm (	INCH/HR)	= 0.23	
AREA-AVERAGED Fp(INCH/HR)	= 0.24	AREA-AV	ERAGED Ap =	0.94		
TOTAL AREA (ACRES) = 21	7.50	PEAK F	LOW RATE (CF	'S) =	578.48	
******	*****	*****	*****	*****	*****	***
FLOW PROCESS FROM NODE						
>>>>ADDITION OF SUBAREA				.=======		===
MAINLINE TC (MIN) = 16.06						
* 100 YEAR RAINFALL INTEN	SITY(INC		3.181			
SUBAREA LOSS RATE DATA (AM			_			
DEVELOPMENT TYPE/ S LAND USE	CS SOIL	AREA	Fp	Ap	SCS	
LAND USE AGRICULTURAL FAIR COVER	GKUUP	(ACKES)	(INCH/HR)	(DECIMAL)	CN	
"PASTURE, DRYLAND"	В	4.10	0.30	1.00	69	
NATURAL FAIR COVER	-		0.00		0.5	
"WOODLAND"	В	1.00	0.30	1.00	60	
AGRICULTURAL POOR COVER						
"FALLOW"	D	1.20	0.20	1.00	94	
RESIDENTIAL	D	05 70	0.00	0 50	7.5	
"5-7 DWELLINGS/ACRE"	ט	85.70	0.20	0.50	75	
NATURAL FAIR COVER "GRASS"	D	50 20	0.20	1 00	8.4	
AGRICULTURAL FAIR COVER	D	30.20	0.20	1.00	0 7	
"ORCHARDS"	D	1.60	0.20	1.00	82	
SUBAREA AVERAGE PERVIOUS		E, Fp(INC	H/HR) = 0.			
SUBAREA AVERAGE PERVIOUS						
SUBAREA AREA (ACRES) = 14	3.80	SUBAREA	RUNOFF (CFS	S = 393.	.02	
EFFECTIVE AREA(ACRES) = AREA-AVERAGED Fp(INCH/HR)	361.30	AREA-A	VERAGED Fm (	INCH/HR)	= 0.19	
TOTAL AREA(ACRES) = 36	1.30	PEAK F	LOW RATE (CF	'S) =	971.50	
				- /		
******	*****	*****	*****	******	*****	***
FLOW PROCESS FROM NODE						
>>>>ADDITION OF SUBAREA				.=======		===
MAINLINE TC(MIN) = 16.06						
* 100 YEAR RAINFALL INTEN		H/HR) =	3.181			
SUBAREA LOSS RATE DATA(AM						
DEVELOPMENT TYPE/ S	CS SOIL	AREA	Fp	Ap	SCS	
	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
URBAN FAIR COVER "TURF"	D	0.20	0.20	1 00	82	
AGRICULTURAL FAIR COVER	D	0.20	0.20	1.00	82	
"PASTURE, DRYLAND"	D	1.20	0.20	1.00	84	
NATURAL FAIR COVER						
"WOODLAND"	D	1.80	0.20		79	
SUBAREA AVERAGE PERVIOUS				20		
SUBAREA AVERAGE PERVIOUS				., -	F.0	
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	3.20	SUBAREA	KUNOFF (CFS	S = 8.	.58	
AREA-AVERAGED Fp(INCH/HR)	= 0 23	AREA-AV	.viraged fm( ERAGED An =	: 0 84	- 0.19	
TOTAL AREA (ACRES) = 36			LOW RATE (CE		980.09	
		- LILL I		-/	-00.00	

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*******************
 FLOW PROCESS FROM NODE 864.00 TO NODE 865.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 165.00 DOWNSTREAM(FEET) = 154.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1172.00 CHANNEL SLOPE = 0.0094
 CHANNEL BASE (FEET) = 8.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 8.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 980.09
 FLOW VELOCITY (FEET/SEC.) = 8.88 FLOW DEPTH (FEET) = 7.24
 TRAVEL TIME (MIN.) = 2.20 Tc (MIN.) = 18.27
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 865.00 = 7873.00 FEET.
*******************
 FLOW PROCESS FROM NODE 864.00 TO NODE 865.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
MAINLINE Tc(MIN) = 18.27
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.953
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                         Aр
                                               SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
                          0.40
                                0.30
                                          0.10
 COMMERCIAL
                   В
                                                56
 NATURAL FAIR COVER
 "WOODLAND"
                          0.30
                    B
                                  0.30
                                         1 00
                                                60
 NATURAL FAIR COVER
 "GRASS"
                           0.10
                                  0.20
                                          1.00
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                           0.20
                                  0.20
                                         1.00
 URBAN FAIR COVER
 "TURF"
                           5.80
                                0.20
                                         1.00
                                                82
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D
                          0.20 0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.95
 SUBAREA AREA(ACRES) = 7.00 SUBAREA RUNOFF(CFS) = 17.38
 EFFECTIVE AREA(ACRES) = 371.50 AREA-AVERAGED Fm(INCH/HR) = 0.19
 AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.85
 TOTAL AREA(ACRES) = 371.50
                          PEAK FLOW RATE(CFS) = 980.09
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
 FLOW PROCESS FROM NODE 864.00 TO NODE 865.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 18.27
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.953
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                        Ap
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 COMMERCIAL
                   D
                         0.10 0.20 0.10 75
 NATURAL FAIR COVER
                         5.90 0.20 1.00 79
 "WOODLAND"
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 6.00 SUBAREA RUNOFF(CFS) = 14.88
 EFFECTIVE AREA(ACRES) = 377.50 AREA-AVERAGED Fm(INCH/HR) = 0.19
 AREA-AVERAGED Fp (INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.85
 TOTAL AREA(ACRES) = 377.50 PEAK FLOW RATE(CFS) =
                                              980.09
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
```

```
FLOW PROCESS FROM NODE 865.00 TO NODE 865.00 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.) = 18.27
 RAINFALL INTENSITY (INCH/HR) = 2.95
 AREA-AVERAGED Fm(INCH/HR) = 0.19
 AREA-AVERAGED Fp(INCH/HR) = 0.23
 AREA-AVERAGED Ap = 0.85
 EFFECTIVE STREAM AREA(ACRES) = 377.50
 TOTAL STREAM AREA(ACRES) = 377.50
 PEAK FLOW RATE (CFS) AT CONFLUENCE =
                               980.09
 ** CONFLUENCE DATA **
        Q Tc
 STREAM
                        AREA
                               HEADWATER
 NUMBER
         (CFS) (MIN.) (ACRES)
                               NODE
         4723.72 75.59
                                3100.00
   1
                       5516.00
         980.09 18.27
                                850.00
   2
                       377.50
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 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.) = 2.0%; VALLEY(UNDEV.)/DESERT= 22.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5893.50
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 865.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0255; Lca/L=0.6,n=.0238
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1762.64
 PEAK FLOW RATE(CFS) = 3997.19
   (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4723.72)
 PEAK FLOW RATE (CFS) USED = 4723.72
FLOW PROCESS FROM NODE 865.00 TO NODE 884.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 154.00 DOWNSTREAM(FEET) = 135.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 6117.00 CHANNEL SLOPE = 0.0031
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH(FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4723.72
 FLOW VELOCITY (FEET/SEC.) = 8.23 FLOW DEPTH (FEET) = 5.93
 TRAVEL TIME (MIN.) = 12.39 Tc (MIN.) = 87.98
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
*******************
 FLOW PROCESS FROM NODE 865.00 TO NODE 884.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE To (MIN) = 87.98
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.196
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                    Fp
                                           Ap SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                    A
                            2 20
                                     0 40
                                           1 00 40
 AGRICULTURAL POOR COVER
```

```
"FALLOW"
                                 4.80
                                         0 40
                                                  1.00
 NATURAL FAIR COVER
 "GRASS"
                                0.80
                                         0.40
                                                  1.00 50
                         Α
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                                0.10
                                         0.40
                                                  1.00
 COMMERCIAL
                                0.50
                                       0.40
                                                  0.10
                         Α
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                        A
                                1.20 0.40 1.00
                                                          19
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.95
 SUBAREA AREA(ACRES) = 9.60
 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.) = 2.0%; VALLEY(UNDEV.) / DESERT = 22.0%
         MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL (MIN) = 10.00 TOTAL AREA (ACRES) = 5903.10
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265; Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1764.52
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3758.65
 TOTAL AREA(ACRES) = 5903.10 PEAK FLOW RATE(CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*********************
 FLOW PROCESS FROM NODE 865.00 TO NODE 884.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 87.98
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.196
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                        Fp
                                                 Αp
                                                        SCS
                      GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "WOODLAND"
                                3.00
                                         0.40
                                                  1.00
                                                          36
 AGRICULTURAL POOR COVER
                                1.70
                                         0.30
                                                  1.00
 NATURAL FAIR COVER
 "GRASS"
                         В
                                2.40
                                         0.30
                                                  1.00
                                                          69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                         В
                                6.40
                                         0.30
                                                  1.00
                                                          65
 COMMERCIAL
                                1.10
                                         0.30
                                                0.10
                         В
 AGRICULTURAL POOR COVER
                         D
                                0.10
                                       0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.32
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
 SUBAREA AREA(ACRES) = 14.70
 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.) = 2.0%; VALLEY(UNDEV.) / DESERT = 22.0%
         MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5917.80
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0322; Lca/L=0.4, n=.0288; Lca/L=0.5, n=.0265; Lca/L=0.6, n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1767.63
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3765.51
 TOTAL AREA(ACRES) = 5917.80 PEAK FLOW RATE(CFS) = 4723.72
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NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
FLOW PROCESS FROM NODE 865.00 TO NODE 884.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 87.98
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.196
 SUBAREA LOSS RATE DATA(AMC II):
                                  Fp
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                                   SCS
                                            Ap
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 NATURAL FAIR COVER
 "GRASS"
                      D
                            1.10
                                     0.20
                                             1.00 84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                           0.40
                                     0.20
                                             1.00
                                   0.20
 COMMERCIAL
                      D
                            0.40
                                           0.10
                                                   75
 NATURAL FAIR COVER
 "WOODLAND"
                      D
                           3.90
                                   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) = 5.80
 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.) = 2.0%; VALLEY(UNDEV.) / DESERT= 22.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.24; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5923.60
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0322; Lca/L=0.4, n=.0288; Lca/L=0.5, n=.0265; Lca/L=0.6, n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1769.42
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3768.84
 TOTAL AREA (ACRES) = 5923.60 PEAK FLOW RATE (CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 884.00 TO NODE 884.00 IS CODE = 1
______
 >>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE <<<
_____
 TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 PEAK FLOW RATE(CFS) = 4723.72 Tc(MIN.) = 87.98
 AREA-AVERAGED Fm(INCH/HR) = 0.24 Ybar = 0.40
 TOTAL AREA(ACRES) = 5923.60
*****************
 FLOW PROCESS FROM NODE 870.00 TO NODE 871.00 IS CODE = 21
 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
_____
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 326.00
 ELEVATION DATA: UPSTREAM(FEET) = 1123.00 DOWNSTREAM(FEET) = 1050.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.640
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.267
 SUBAREA To AND LOSS RATE DATA (AMC II):
  DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                            Ap SCS Tc
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 NATURAL FAIR COVER
 "GRASS"
                      C
                             0.20
                                     0.25
                                             1.00 79 9.64
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NATURAL FAIR COVER
                        0.30 0.20 1.00 84 9.64
                    D
 'GRASS"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF(CFS) =
                 1.82
 TOTAL AREA(ACRES) = 0.50 PEAK FLOW RATE(CFS) =
FLOW PROCESS FROM NODE 871.00 TO NODE 872.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 1050.00 DOWNSTREAM(FEET) = 1010.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 238.00 CHANNEL SLOPE = 0.1681
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1.82
 FLOW VELOCITY (FEET/SEC.) = 5.14 FLOW DEPTH (FEET) = 0.28
 TRAVEL TIME (MIN.) = 0.77 Tc (MIN.) = 10.41
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 872.00 = 564.00 FEET.
*******************
 FLOW PROCESS FROM NODE 871.00 TO NODE 872.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 10.41
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.078
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                       Ар
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "GRASS"
                          0.10
                                 0.25
                                        1.00
                                              79
 NATURAL FAIR COVER
 "GRASS"
                   D
                        0.80 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) = 0.90 SUBAREA RUNOFF (CFS) = 3.14
 EFFECTIVE AREA(ACRES) = 1.40 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 1.40
                       PEAK FLOW RATE(CFS) =
*****
 FLOW PROCESS FROM NODE 872.00 TO NODE 873.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1010.00 DOWNSTREAM(FEET) = 975.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 408.00 CHANNEL SLOPE = 0.0858
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                         4.87
 FLOW VELOCITY (FEET/SEC.) = 5.35 FLOW DEPTH (FEET) = 0.58
 TRAVEL TIME (MIN.) = 1.27 Tc (MIN.) = 11.68
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 873.00 = 972.00 FEET.
*******************
 FLOW PROCESS FROM NODE 872.00 TO NODE 873.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 11.68
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.824
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                             SCS
                                Fp
                                        Aр
```

```
GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                  C
                         0.60 0.25 1.00 79
 NATURAL FAIR COVER
 "GRASS"
                   D
                         1.80 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) = 2.40 SUBAREA RUNOFF(CFS) = 7.80
 EFFECTIVE AREA(ACRES) = 3.80 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 3.80 PEAK FLOW RATE(CFS) = 12.35
*****************
 FLOW PROCESS FROM NODE 873.00 TO NODE 874.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 975.00 DOWNSTREAM(FEET) = 941.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 369.00 CHANNEL SLOPE = 0.0921
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 12.35
 FLOW VELOCITY (FEET/SEC.) = 7.01 FLOW DEPTH (FEET) = 0.92
 TRAVEL TIME (MIN.) = 0.88 Tc (MIN.) = 12.56
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 874.00 = 1341.00 FEET.
*****************
 FLOW PROCESS FROM NODE 873.00 TO NODE 874.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 12.56
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.651
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                      Ap SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "GRASS"
                   С
                         0.50 0.25 1.00 79
 NATURAL FAIR COVER
                   D 2.70 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) = 3.20 SUBAREA RUNOFF(CFS) = 9.92
 EFFECTIVE AREA(ACRES) = 7.00 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 7.00 PEAK FLOW RATE(CFS) = 21.68
*******************
 FLOW PROCESS FROM NODE 874.00 TO NODE 875.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 941.00 DOWNSTREAM(FEET) = 932.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 82.00 CHANNEL SLOPE = 0.1098
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 21.68
 FLOW VELOCITY (FEET/SEC.) = 8.46 FLOW DEPTH (FEET) = 0.89
 TRAVEL TIME (MIN.) = 0.16 Tc (MIN.) = 12.72
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 875.00 = 1423.00 FEET.
******************
 FLOW PROCESS FROM NODE 874.00 TO NODE 875.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
```

```
______
 MAINLINE Tc (MIN) = 12.72
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.628
 SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                        0.40 0.25 1.00 79
 NATURAL FAIR COVER
                  D 4.30 0.20 1.00 84
 "GRASS"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 4.70 SUBAREA RUNOFF(CFS) = 14.48
 EFFECTIVE AREA(ACRES) = 11.70 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 11.70 PEAK FLOW RATE(CFS) =
FLOW PROCESS FROM NODE 875.00 TO NODE 876.00 IS CODE = 51
______
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
ELEVATION DATA: UPSTREAM(FEET) = 941.00 DOWNSTREAM(FEET) = 932.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 82.00 CHANNEL SLOPE = 0.1098
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 36.02
 FLOW VELOCITY (FEET/SEC.) = 9.69 FLOW DEPTH (FEET) = 1.17
 TRAVEL TIME (MIN.) = 0.14 Tc (MIN.) = 12.86
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 876.00 = 1505.00 FEET.
*******************
FLOW PROCESS FROM NODE 875.00 TO NODE 876.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
MAINLINE Tc(MIN) = 12.86
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.608
 SUBAREA LOSS RATE DATA(AMC II):
DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                     Ap
                GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                  D
                        3.20 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) = 3.20 SUBAREA RUNOFF(CFS) = 9.81
 EFFECTIVE AREA(ACRES) = 14.90 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 14.90 PEAK FLOW RATE(CFS) = 45.62
FLOW PROCESS FROM NODE 876.00 TO NODE 877.00 IS CODE = 51
_______
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 932.00 DOWNSTREAM(FEET) = 905.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 340.00 CHANNEL SLOPE = 0.0794
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 45.62
 FLOW VELOCITY (FEET/SEC.) = 9.17 FLOW DEPTH (FEET) = 1.44
 TRAVEL TIME (MIN.) = 0.62 Tc (MIN.) = 13.48
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 877.00 = 1845.00 FEET.
******************
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FLOW PROCESS FROM NODE 876.00 TO NODE 877.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 13.48
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.519
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                               Fp
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                    D
                         7.70
                                0.20
                                       1 00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    D 3.70
                                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) = 11.40 SUBAREA RUNOFF(CFS) = 34.05
 EFFECTIVE AREA(ACRES) = 26.30 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp (INCH/HR) = 0.20 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 26.30 PEAK FLOW RATE (CFS) = 78.48
*****
 FLOW PROCESS FROM NODE 877.00 TO NODE 878.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <><<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 905.00 DOWNSTREAM(FEET) = 860.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 803.00 CHANNEL SLOPE = 0.0560
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 78.48
 FLOW VELOCITY (FEET/SEC.) = 9.17 FLOW DEPTH (FEET) = 1.79
 TRAVEL TIME (MIN.) = 1.46 Tc (MIN.) = 14.94
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 878.00 = 2648.00 FEET.
*******************
 FLOW PROCESS FROM NODE 877.00 TO NODE 878.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE TC (MIN) = 14.94
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.309
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                               SCS
    LAND USF
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                          8.90
                                  0.20
                    D
                                         1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    D
                          8.00
                                0.20
                                        1.00 83
 NATURAL FAIR COVER
                    D
                         0.40
                                0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
                        SUBAREA RUNOFF(CFS) = 48.40
 SUBAREA AREA(ACRES) = 17.30
 EFFECTIVE AREA(ACRES) = 43.60 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 43.60 PEAK FLOW RATE(CFS) = 121.90
*******************
 FLOW PROCESS FROM NODE 878.00 TO NODE 879.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
-----
 ELEVATION DATA: UPSTREAM(FEET) = 860.00 DOWNSTREAM(FEET) = 755.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1104.00 CHANNEL SLOPE = 0.0951
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
```

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MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 121.90
 FLOW VELOCITY (FEET/SEC.) = 12.51 FLOW DEPTH (FEET) = 1.96
 TRAVEL TIME (MIN.) = 1.47 Tc (MIN.) = 16.41
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 879.00 = 3752.00 FEET.
*****
FLOW PROCESS FROM NODE 878.00 TO NODE 879.00 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):
                                       Ap
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                 Fp
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                          17.30
                                   0.20
                                          1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     D 24 40 0 20 1 00
                                                83
 NATURAL FAIR COVER
                         3.60 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) = 45.30 SUBAREA RUNOFF(CFS) = 119.94
 EFFECTIVE AREA(ACRES) = 88.90 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 88.90 PEAK FLOW RATE(CFS) =
**********************
 FLOW PROCESS FROM NODE 879.00 TO NODE 880.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 755.00 DOWNSTREAM(FEET) = 533.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1578.00 CHANNEL SLOPE = 0.1407
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 235.30
 FLOW VELOCITY (FEET/SEC.) = 17.14 FLOW DEPTH (FEET) = 2.50
 TRAVEL TIME (MIN.) = 1.53 Tc (MIN.) = 17.95
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 880.00 = 5330.00 FEET.
*******************
 FLOW PROCESS FROM NODE 879.00 TO NODE 880.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE TC(MIN) = 17.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.981
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "GRASS"
                           9.80
                                   0.25
                                          1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                           11.40
                                   0.25
                                          1.00 77
 NATURAL FAIR COVER
 "WOODLAND"
                     C
                           1.10
                                   0.25
                                          1 00
                                               73
 NATURAL FAIR COVER
 "GRASS"
                           8.30
                                   0.20
                                          1.00
                                                84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           38.20
                                   0.20
                                          1.00
 NATURAL FAIR COVER
                                        1.00 79
 "WOODI.AND"
                     D
                           8.70
                                   0.20
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
```

```
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 77.50 SUBAREA RUNOFF(CFS) = 192.95
 EFFECTIVE AREA(ACRES) = 166.40 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 166.40 PEAK FLOW RATE (CFS) = 415.36
*******************
 FLOW PROCESS FROM NODE 880.00 TO NODE 881.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 533.00 DOWNSTREAM(FEET) = 415.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1236.00 CHANNEL SLOPE = 0.0955
 CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 415.36
 FLOW VELOCITY (FEET/SEC.) = 17.08 FLOW DEPTH (FEET) = 3.32
 TRAVEL TIME (MIN.) = 1.21 Tc (MIN.) = 19.15
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 881.00 = 6566.00 FEET.
FLOW PROCESS FROM NODE 880.00 TO NODE 881.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 19.15
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.875
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                      Ap SCS
                              Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
                         30.10
                                              79
 "GRASS"
                                 0.25
                                        1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C
                        15.30
                                 0.25
                                        1.00
                                              77
 NATURAL FAIR COVER
 "WOODLAND"
                         2.00
                                 0.25
                                        1.00
                                             73
                   C
 NATURAL FAIR COVER
 "GRASS"
                   D 11.30 0.20
                                       1 00 84
 NATURAL FAIR COVER
                         5.10 0.20 1.00 83
 "OPEN BRUSH"
 NATURAL FAIR COVER
                        1.10
                               0.20 1.00 79
                   D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 64.90 SUBAREA RUNOFF(CFS) = 154.09
 EFFECTIVE AREA(ACRES) = 231.30 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 231.30 PEAK FLOW RATE(CFS) = 553.55
*****
 FLOW PROCESS FROM NODE 881.00 TO NODE 882.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 415.00 DOWNSTREAM(FEET) = 190.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 2805.00 CHANNEL SLOPE = 0.0802
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 553.55
 FLOW VELOCITY (FEET/SEC.) = 17.16 FLOW DEPTH (FEET) = 3.71
 ******************
 FLOW PROCESS FROM NODE 881.00 TO NODE 882.00 IS CODE = 81
```

```
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 21.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.657
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                    B
                          0.50
                                  0.30
                                         1.00
                                               69
 NATURAL FAIR COVER
 "WOODI AND"
                          0.20
                                  0.30
                                         1.00
                                               60
                    В
 NATURAL FAIR COVER
 "GRASS"
                          18.20
                                  0.25
                                         1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          10.80
                                  0.25
                                         1.00 77
 NATURAL FAIR COVER
 "WOODLAND"
                         1.20
                                0.25 1.00 73
 NATURAL FAIR COVER
                        36.30 0.20 1.00 84
 "GRASS"
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 67.20 SUBAREA RUNOFF(CFS) = 147.20
 EFFECTIVE AREA(ACRES) = 298.50 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 298.50 PEAK FLOW RATE (CFS) = 655.54
*******************
 FLOW PROCESS FROM NODE 881.00 TO NODE 882.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 21.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.657
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
                 D
                         7.10 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) = 7.10 SUBAREA RUNOFF(CFS) = 15.70
 EFFECTIVE AREA(ACRES) = 305.60 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 305.60 PEAK FLOW RATE(CFS) = 671.24
*******************
 FLOW PROCESS FROM NODE 882.00 TO NODE 883.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 190.00 DOWNSTREAM(FEET) = 184.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 86.00 CHANNEL SLOPE = 0.0698
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 671.24
 FLOW VELOCITY (FEET/SEC.) = 17.14 FLOW DEPTH (FEET) = 4.24
 TRAVEL TIME (MIN.) = 0.08 Tc (MIN.) = 21.96
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 883.00 = 9457.00 FEET.
*******************
 FLOW PROCESS FROM NODE 882.00 TO NODE 883.00 IS CODE = 81
._____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 21.96
```

* 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA(		CH/HR) =	2.651		
		APFA	Fn	Δn	909
DEVELOPMENT TYPE/ LAND USE	CDOLLD	(ACDEC)	(TNCU/UD)	(DECIMAL)	CM
NAMIDAL EATH COVER	GROOT	(ACICES)	(INCII/III()	(DECIME)	CIV
NATURAL FAIR COVER	D	1 70	0 20	1.00	C0
"GRASS"	В		0.30		
COMMERCIAL	В	0.30	0.30	0.10	56
NATURAL FAIR COVER	~	46.00	0.05	1 00	<b>5</b> 0
"GRASS"	C	46.00	0.25	1.00	79
NATURAL FAIR COVER					
"OPEN BRUSH"	С	20.20	0.25	1.00	77
NATURAL FAIR COVER					
"WOODLAND"	С	4.40	0.25	1.00	73
NATURAL POOR COVER					
"BARREN"			0.20		93
SUBAREA AVERAGE PERVIOU	S LOSS RAT	TE, Fp(INC	CH/HR) = 0.	. 25	
SUBAREA AVERAGE PERVIOU	S AREA FRA	ACTION, Ap	= 1.00		
SUBAREA AREA(ACRES) =	73.00	SUBAREA	RUNOFF (CFS	S) = 157.7	5
EFFECTIVE AREA (ACRES) =	378.60	AREA-A	VERAGED Fm	(INCH/HR) =	0.22
AREA-AVERAGED Fp(INCH/H	R) = 0.22	AREA-AV	ERAGED Ap =	= 1.00	
TOTAL AREA(ACRES) =					27.25
				,	
******	*****	******	*****	*****	*****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBARE					
======================================					
MAINLINE TC (MIN) = 21.		~ / \	0 651		
* 100 YEAR RAINFALL INT			2.651		
SUBAREA LOSS RATE DATA(					
DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
NATURAL FAIR COVER					
"GRASS"	D	187.70	0.20	1.00	84
NATURAL FAIR COVER					
"OPEN BRUSH"	D	94.40	0.20	1.00	83
"OPEN BRUSH" COMMERCIAL	D	7.70			75
NATURAL FAIR COVER					
"WOODLAND"	D	7.90	0.20	1.00	79
SUBAREA AVERAGE PERVIOU					• •
SUBAREA AVERAGE PERVIOU				0	
SUBAREA AREA (ACRES) =	297 70	SIIBABEZ	DIMOFF/CF9	3) = 657 9	6
EFFECTIVE AREA (ACRES) =	676 30	) APFA-Z	VEDACED Em	(TNCH/HP) =	n 21
AREA-AVERAGED Fp(INCH/H	D) - 0.31	ז הבתבת ה	VERNAGED IN -	- 0 00	0.21
MODAL ADEA (ACDEC) -	676 20	L AREATAV	ERAGED AP -	- 0.99	05 20
TOTAL AREA(ACRES) =	0/0.30	PEAK F	LOW RATE (CE	(5) = 14	83.20
******					
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDA					
>>>>TRAVELTIME THRU SU	BAREA (EXI	ISTING ELE	MENT) <<<<		
ELEVATION DATA: UPSTREA	M(FEET) =	184.00	DOWNSTREA	AM(FEET) =	135.00
CHANNEL LENGTH THRU SUB					
CHANNEL BASE (FEET) =	7.00 "2	THEACTOR			
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0 03				0.0	
MANNING'S FACTOR = 0.03	O MAXIMU	JM DEPTH(F	TEET) = 7.	.00	
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR	0 MAXIMU EA(CFS) =	JM DEPTH(E 1485.20	TEET) = 7.		
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY (FEET/SEC.	0 MAXIMU EA(CFS) = ) = 15.60	JM DEPTH(F 1485.20 5 FLOW D	TEET) = 7. DEPTH(FEET)		
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR	0 MAXIMU EA(CFS) = ) = 15.60	JM DEPTH(F 1485.20 5 FLOW D	TEET) = 7. DEPTH(FEET)		
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY (FEET/SEC.	0 MAXIMU EA(CFS) = ) = 15.66 .87 Tc(N	JM DEPTH(F 1485.20 5 FLOW D 4IN.) = 2	TEET) = 7. DEPTH(FEET) 24.83	= 6.85	00 FEET.
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY(FEET/SEC. TRAVEL TIME(MIN.) = 2	0 MAXIMU EA(CFS) = ) = 15.66 .87 Tc(N	JM DEPTH(F 1485.20 5 FLOW D 4IN.) = 2	TEET) = 7. DEPTH(FEET) 24.83	= 6.85	00 FEET.
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY(FEET/SEC. TRAVEL TIME(MIN.) = 2	0 MAXIMU EA(CFS) = ) = 15.66 .87 Tc(NODE 870	JM DEPTH(F 1485.20 5 FLOW D 4IN.) = 2 0.00 TO NO	TEET) = 7. DEPTH(FEET) 24.83 DDE 884.0	= 6.85 00 = 12158.	
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY (FEET/SEC. TRAVEL TIME (MIN.) = 2 LONGEST FLOWPATH FROM N	0 MAXIMU EA(CFS) = ) = 15.66 .87 Tc(NODE 870	JM DEPTH(E 1485.20 5 FLOW D 4IN.) = 2 0.00 TO NO	TEET) = 7.  DEPTH (FEET)  4.83  DDE 884.0	= 6.85 00 = 12158.	*****
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY (FEET/SEC. TRAVEL TIME (MIN.) = 2 LONGEST FLOWPATH FROM N	0 MAXIMU EA(CFS) = ) = 15.66 .87 Tc(NODE 870 ************************************	JM DEPTH(F 1485.20 5 FLOW D MIN.) = 2 0.00 TO NO	PEET) = 7.  DEPTH(FEET)  24.83  DDE 884.00  **********************************	= 6.85 00 = 12158.	*****
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY(FEET/SEC. TRAVEL TIME(MIN.) = 2 LONGEST FLOWPATH FROM N  ***********************************	0 MAXIMU EA(CFS) = ) = 15.66 .87 Tc(NODE 870 ************************************	JM DEPTH(F 1485.20 5 FLOW D 4IN.) = 2 0.00 TO NO	PEET) = 7.0 DEPTH(FEET) 14.83 DDE 884.0	= 6.85 00 = 12158.	*****
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY(FEET/SEC. TRAVEL TIME(MIN.) = 2 LONGEST FLOWPATH FROM N	0 MAXIMU EA(CFS) = 15.66 .87 Tc(NODE 870 ************************************	JM DEPTH(F 1485.20 5 FLOW D 4IN.) = 2 0.00 TO NO ************ TO NODE	TEET) = 7.  DEPTH (FEET)  14.83  DDE 884.0  ************  884.00 IS  FLOW<<<<	= 6.85 00 = 12158. ************************************	******** 1 
MANNING'S FACTOR = 0.03 CHANNEL FLOW THRU SUBAR FLOW VELOCITY(FEET/SEC. TRAVEL TIME(MIN.) = 2 LONGEST FLOWPATH FROM N  ***********************************	0 MAXIMU EA(CFS) = ) = 15.66 .87 Tc(NODE 870 ************************************	JM DEPTH(F 1485.20 5 FLOW D 4IN.) = 2 0.00 TO NO ************ TO NODE	TEET) = 7.  DEPTH (FEET)  14.83  DDE 884.0  ************  884.00 IS  FLOW<<<<	= 6.85 00 = 12158. ************************************	******** 1 

* 100 YEAR RAINFALL INT			2.470		
SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/	AMC II):	ADFA	Fn	Δn	909
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
NATURAL FAIR COVER		, ,	, , ,	,	
"GRASS"	A	1.60	0.40	1.00	50
AGRICULTURAL FAIR COVER					
"ORCHARDS"	A	0.20	0.40	1.00	44
COMMERCIAL	A	3.90	0.40	0.10	32
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" NATURAL FAIR COVER		06.00	0.40	1 00	4.0
"PASTURE, DRYLAND"	A	26.80	0.40	1.00	49
NATURAL FAIR COVER "WOODLAND"	7\	2 60	0.40	1 00	3.6
NATURAL POOR COVER	А	2.00	0.40	1.00	30
"BARREN"	В	2.00	0.30	1.00	86
SUBAREA AVERAGE PERVIOUS					
SUBAREA AVERAGE PERVIOUS	S AREA FRA	ACTION, A	p = 0.91		
SUBAREA AREA(ACRES) =	37.10	SUBARE	A RUNOFF (CF	3) = 70.5	56
EFFECTIVE AREA(ACRES) =	713.40	AREA-	AVERAGED Fm	(INCH/HR) :	= 0.22
AREA-AVERAGED Fp(INCH/H)	R) = 0.22	2 AREA-A	VERAGED Ap =	- 0.98	
TOTAL AREA (ACRES) =				FS) = 1	485.20
NOTE: PEAK FLOW RATE DE	FAULTED TO	UPSTREAL	M VALUE		
*****	******	******	*******	*****	*****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA	A TO MAIN	LINE PEAK	FLOW<		
MAINLINE TC (MIN) = 24.3		/ \			
* 100 YEAR RAINFALL INT			2.4/0		
SUBAREA LOSS RATE DATA(	AMC II):	ADEA	En	7.50	000
DEVELOPMENT TYPE/ LAND USE	CROUD	(ACDEC)	rp (TMCU/UD)	(DECIMAL)	CM
AGRICULTURAL FAIR COVER	GROOF	(ACKES)	(INCII/IIK)	(DECIMAL)	CIV
"ORCHARDS"	В	2.40	0.30	1.00	6.5
COMMERCIAL	В	5.30		0.10	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	В	11.60	0.30	1.00	69
NATURAL FAIR COVER					
"WOODLAND"	В	5.80	0.30	1.00	60
NATURAL FAIR COVER					
"GRASS"		24.90	0.25	1.00	79
AGRICULTURAL FAIR COVER	~	0 00	0.05	1 00	7.7
"ORCHARDS" SUBAREA AVERAGE PERVIOU:	C TOCC DA	U.9U	0.25	1.00	11
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS				. 2 /	
SUBAREA AREA(ACRES) =				3) = 101 :	8.5
EFFECTIVE AREA(ACRES) =	764.30	) AREA-	AVERAGED Fm	(TNCH/HR) :	= 0.22
AREA-AVERAGED Fp(INCH/H					**
TOTAL AREA(ACRES) =	764.30	PEAK 1	FLOW RATE (CI	FS) = 1	547.38
******					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBARE					
MAINLINE TC(MIN) = 24.3					
* 100 YEAR RAINFALL INT		CH/HR) =	2.470		
SUBAREA LOSS RATE DATA(	•	. ,			
DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	SCS
LAND USE			(INCH/HR)	-	
NATURAL FAIR COVER	01.001	(11011110)	, 11,011/1111/	(22011111)	
"OPEN BRUSH"	С	8.00	0.25	1.00	77
COMMERCIAL	C	0.90	0.25	0.10	69
NATURAL FAIR COVER					
"WOODLAND"	C	3.20	0.25	1.00	73
NATURAL POOR COVER					
			-		

```
"BARREN"
                             0.20
                                     0.20
                                             1.00
 NATURAL FAIR COVER
 "GRASS"
                      D 29.30
                                   0.20 1.00 84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                           13.50 0.20 1.00 82
                      D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 55.10 SUBAREA RUNOFF(CFS) = 112.20
 EFFECTIVE AREA(ACRES) = 819.40 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 819.40 PEAK FLOW RATE(CFS) = 1659.58
*****************
 FLOW PROCESS FROM NODE 883.00 TO NODE 884.00 IS CODE = 81
.....
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 24.83
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.470
 SUBAREA LOSS RATE DATA(AMC II):
                                           Ap SCS
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                    Fρ
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     D
                            1.60
                                     0.20
                                             1.00 83
 COMMERCIAL
                     D 28.20 0.20
                                           0.10 75
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     D 0.40 0.20
                                           1.00 84
 NATURAL FAIR COVER
                     D
 "WOODT.AND"
                            2.10
                                   0.20
                                           1 00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.21
 SUBAREA AREA(ACRES) = 32.30 SUBAREA RUNOFF(CFS) = 70.56
 EFFECTIVE AREA(ACRES) = 851.70 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 851.70 PEAK FLOW RATE(CFS) = 1730.13
*****
 FLOW PROCESS FROM NODE 884.00 TO NODE 884.00 IS CODE = 1
 >>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE <<<
 >>>>AND COMPLITE VARIOUS CONFLUENCED STREAM VALUES<
_____
 TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
 TIME OF CONCENTRATION (MIN.) = 24.83
 RAINFALL INTENSITY (INCH/HR) = 2.47
 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp (INCH/HR) = 0.22
 AREA-AVERAGED Ap = 0.95
 EFFECTIVE STREAM AREA(ACRES) = 851.70
 TOTAL STREAM AREA(ACRES) = 851.70
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 1730.13
 ** CONFLUENCE DATA **
       Q Tc
                               HEADWATER
 STREAM
                        AREA
        (CFS) (MIN.) (ACRES)
 NUMBER
                               NODE
         4723.72 87.98 5923.60
  1
                                3100.00
        1730.13 24.83 851.70 870.00
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 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.) = 2.0%; VALLEY(UNDEV.)/DESERT= 22.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.24; Ybar = 0.39
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.74; 30M = 0.74; 1HR = 0.74;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
```

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UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 6775.30 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265; Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 2027.33
 PEAK FLOW RATE(CFS) = 4234.63
  (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4723.72)
 PEAK FLOW RATE (CFS) USED = 4723.72
******************
 FLOW PROCESS FROM NODE 884.00 TO NODE 885.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 135.00 DOWNSTREAM(FEET) = 132.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 207.00 CHANNEL SLOPE = 0.0145
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4723.72
 FLOW VELOCITY (FEET/SEC.) = 13.56 FLOW DEPTH (FEET) = 3.77
 TRAVEL TIME (MIN.) = 0.25 Tc (MIN.) = 88.23
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 885.00 = 53680.00 FEET.
*******************
FLOW PROCESS FROM NODE 884.00 TO NODE 885.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 88.23
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.194
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                    Fp
                                           Αp
    LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                            0.10
                                    0.40
                                            1.00
                                                   40
 AGRICULTURAL POOR COVER
 "FALLOW"
                            0.40 0.40 1.00 77
                     A
 NATURAL FAIR COVER
 "WOODLAND"
                            1.30 0.40 1.00 36
                     A
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 1.80
 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.) = 2.0%; VALLEY(UNDEV.) / DESERT= 22.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.18; Fm(INCH/HR) = 0.24; Ybar = 0.39
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.74; 30M = 0.74; 1HR = 0.74;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 6777.10
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 885.00 = 53680.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
 Lca/L=0.3,n=.0322; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265; Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 2027.55
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 4227.80
 TOTAL AREA(ACRES) = 6777.10 PEAK FLOW RATE(CFS) = 4723.72
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
______
 END OF STUDY SUMMARY:
 TOTAL AREA (ACRES) = 6777.10 TC (MIN.) = 88.23
 AREA-AVERAGED Fm(INCH/HR) = 0.24 Ybar = 0.39
 PEAK FLOW RATE (CFS) = 4723.72
_____
_____
 END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANAL
```

## PRELIMINARY DRAFT - FOR INTERNAL USE ONLY

TECHNICAL APPENDIX V-B
HYDROLOGIC ANALYSIS
PROPOSED 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.
                    430 Exchange, Suite 200
                     Irvine, CA. 92602-1309
                       714 - 734 - 5100
______
 FILE NAME: CP31100H.DAT
 TIME/DATE OF STUDY: 07:31 04/01/2004
______
 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 0.0312 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)
                                0.160
       FOOTHILL.
                                   0.140
       MOUNTAIN
                                  0.620
       VALLEY (UNDEVELOPED) / DESERT
                                 0.080
       DESERT (UNDEVELOPED)
                                   0.000
  STERRA 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 3100.00 TO NODE 3101.00 IS CODE = 21
```

>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<

```
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
._____
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 329.00
 ELEVATION DATA: UPSTREAM(FEET) = 1195.00 DOWNSTREAM(FEET) = 1090.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.013
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.414
 SUBAREA To AND LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fρ
                                        Ap SCS Tc
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 NATURAL FAIR COVER
                   C 1.20 0.25 1.00 77 9.01
 "OPEN BRUSH"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF (CFS) = 4.50
 TOTAL AREA(ACRES) = 1.20 PEAK FLOW RATE(CFS) = 4.50
*******************
 FLOW PROCESS FROM NODE 3101.00 TO NODE 3102.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 1090.00 DOWNSTREAM(FEET) = 1060.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 246.00 CHANNEL SLOPE = 0.1220
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4.50
 FLOW VELOCITY (FEET/SEC.) = 5.99 FLOW DEPTH (FEET) = 0.50
 TRAVEL TIME (MIN.) = 0.68 Tc (MIN.) = 9.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3102.00 = 575.00 FEET.
******************
 FLOW PROCESS FROM NODE 3101.00 TO NODE 3102.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 9.70
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.249
 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"
                         0.20 0.30 1.00 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C 0.70 0.25 1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C
                         0.10 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) = 1.00 SUBAREA RUNOFF(CFS) = 3.59
 EFFECTIVE AREA(ACRES) = 2.20 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 2.20 PEAK FLOW RATE(CFS) =
*******************
 FLOW PROCESS FROM NODE 3102.00 TO NODE 3103.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1060.00 DOWNSTREAM(FEET) = 1050.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 131.00 CHANNEL SLOPE = 0.0763
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 7.91
```

```
FLOW VELOCITY (FEET/SEC.) = 5.83 FLOW DEPTH (FEET) = 0.77
 TRAVEL TIME (MIN.) = 0.37 Tc (MIN.) = 10.07
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3103.00 = 706.00 FEET.
*****
 FLOW PROCESS FROM NODE 3102.00 TO NODE 3103.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
.----
 MAINLINE Tc (MIN) = 10.07
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.145
 SUBAREA LOSS RATE DATA(AMC II):
                               Fp
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                               SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          0.80
                                0.30
                   В
                                         1.00 66
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C
                          2.60 0.25
                                        1.00 77
 AGRICULTURAL FAIR COVER
                C
                         0.10 0.25 1.00 79
 "PASTURE, DRYLAND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 3.50 SUBAREA RUNOFF(CFS) = 12.23
 EFFECTIVE AREA(ACRES) = 5.70 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 5.70 PEAK FLOW RATE(CFS) = 19.94
*****
 FLOW PROCESS FROM NODE 3103.00 TO NODE 3104.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1050.00 DOWNSTREAM(FEET) = 1040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 141.00 CHANNEL SLOPE = 0.0709
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 19.94
 FLOW VELOCITY (FEET/SEC.) = 7.05 FLOW DEPTH (FEET) = 0.96
 TRAVEL TIME (MIN.) = 0.33 Tc (MIN.) = 10.41
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3104.00 = 847.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3103.00 TO NODE 3104.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 10.41
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.079
 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"
                          0.80
                                0.30
                                        1.00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                  В
                          0.60
                                0.30
                                        1.00 69
 NATURAL FAIR COVER
                         2.70
 "OPEN BRUSH"
                    C
                                 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) = 4.10 SUBAREA RUNOFF(CFS) = 14.07
 EFFECTIVE AREA(ACRES) = 9.80 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 9.80 PEAK FLOW RATE(CFS) = 33.66
*******************
 FLOW PROCESS FROM NODE 3104.00 TO NODE 3105.00 IS CODE = 51
```

```
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>
ELEVATION DATA: UPSTREAM(FEET) = 1040.00 DOWNSTREAM(FEET) = 1030.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 156.00 CHANNEL SLOPE = 0.0641
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                           33.66
 FLOW VELOCITY (FEET/SEC.) = 7.83 FLOW DEPTH (FEET) = 1.30
 TRAVEL TIME (MIN.) = 0.33 Tc (MIN.) = 10.74
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3105.00 = 1003.00 FEET.
*****
FLOW PROCESS FROM NODE 3104.00 TO NODE 3105.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 10.74
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.012
 SUBAREA LOSS RATE DATA(AMC II):
                                Fp
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                         Ap
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                                   0.30
                           1 50
                                          1 00
                                                 66
                     B
 AGRICULTURAL FAIR COVER
                           0.90 0.30 1.00 69
 "PASTURE, DRYLAND"
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          3.50
                                 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) = 5.90 SUBAREA RUNOFF (CFS) = 19.87
 EFFECTIVE AREA(ACRES) = 15.70 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 15.70 PEAK FLOW RATE(CFS) = 52.95
*******************
 FLOW PROCESS FROM NODE 3105.00 TO NODE 3106.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1030.00 DOWNSTREAM(FEET) = 1010.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 462.00 CHANNEL SLOPE = 0.0433
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                           52.95
 FLOW VELOCITY (FEET/SEC.) = 7.61 FLOW DEPTH (FEET) = 1.82
 TRAVEL TIME (MIN.) = 1.01 Tc (MIN.) = 11.75
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3106.00 = 1465.00 FEET.
*******************
FLOW PROCESS FROM NODE 3105.00 TO NODE 3106.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 11.75
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.810
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                Fp
                                         Ap
                                               SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.90
                                   0.30
                                          1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           3.10
                                   0.30
                                          1.00
                                                69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                           6.20
                                          1.00 77
                                   0.25
```

```
AGRICULTURAL FAIR COVER
                            0.10 0.25 1.00 79
  "PASTURE,DRYLAND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 10.30 SUBAREA RUNOFF(CFS) = 32.82
 EFFECTIVE AREA(ACRES) = 26.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 26.00 PEAK FLOW RATE(CFS) =
                                                  82 91
******************
 FLOW PROCESS FROM NODE 3106.00 TO NODE 3107.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 1010.00 DOWNSTREAM(FEET) = 980.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 589.00 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) = 82.91
 FLOW VELOCITY (FEET/SEC.) = 8.98 FLOW DEPTH (FEET) = 1.89
 TRAVEL TIME (MIN.) = 1.09 Tc (MIN.) = 12.84
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3107.00 = 2054.00 FEET.
**********************
 FLOW PROCESS FROM NODE 3106.00 TO NODE 3107.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 12.84
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.611
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                           Ap
                                   Fρ
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                           1.30
                                  0.30
 "OPEN BRUSH"
                                           1 00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     в 2.70 0.30
                                          1.00 69
 NATURAL FAIR COVER
                           4.30
                                  0.25
 "OPEN BRUSH"
                                          1.00 77
 AGRICULTURAL FAIR COVER
                                          1.00 79
 "PASTURE, DRYLAND"
                     С
                           1.50
                                   0.25
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 9.80
                         SUBAREA RUNOFF(CFS) = 29.46
 EFFECTIVE AREA(ACRES) = 35.80 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 35.80
                            PEAK FLOW RATE (CFS) =
*******************
 FLOW PROCESS FROM NODE 3107.00 TO NODE 3108.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 980.00 DOWNSTREAM(FEET) = 970.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 322.00 CHANNEL SLOPE = 0.0311
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 107.70
 FLOW VELOCITY (FEET/SEC.) = 8.01 FLOW DEPTH (FEET) = 2.46
 TRAVEL TIME (MIN.) = 0.67 Tc (MIN.) = 13.51
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3108.00 = 2376.00 FEET.
 FLOW PROCESS FROM NODE 3107.00 TO NODE 3108.00 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 FAIR COVER "OPEN BRUSH" B 1.20 0.30 1.00 66	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" B 3.90 0.30 1.00 69	
"PASTURE, DRYLAND" B 3.90 0.30 1.00 69 NATURAL FAIR COVER "OPEN BRUSH" C 8.60 0.25 1.00 77	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" C 2.40 0.25 1.00 79	
"PASTURE, DRYLAND" C 2.40 0.25 1.00 79  NATURAL FAIR COVER "WOODLAND" C 2.20 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) = 18.30 SUBAREA RUNOFF (CFS) = 53.53  EFFECTIVE AREA (ACRES) = 54.10 AREA-AVERAGED Fm (INCH/HR) = 0.27	
AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 54.10 PEAK FLOW RATE(CFS) = 158.12	
TOTAL AREA(ACRES) = 54.10 PEAK FLOW RATE(CFS) = 158.12	
******************	
FLOW PROCESS FROM NODE 3108.00 TO NODE 3109.00 IS CODE = 51	
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<>>>> TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>	
ELEVANTON DAMA, UDOMDERN/DEEM) - 070.00 DOMNOMBERN/DEEM) - 050.00	
ELEVATION DATA: UPSTREAM(FEET) = 970.00 DOWNSTREAM(FEET) = 950.00 CHANNEL LENGTH THRU SUBAREA(FEET) = 654.00 CHANNEL SLOPE = 0.0306	
CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000	
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 4.00	
CHANNEL FLOW THRU SUBAREA(CFS) = 158.12 FLOW VELOCITY(FEET/SEC.) = 8.72 FLOW DEPTH(FEET) = 2.70	
TRAVEL TIME (MIN.) = $1.25$ Tc (MIN.) = $14.76$	
LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3109.00 = 3030.00 FEET.	
*******************	
FLOW PROCESS FROM NODE 3108.00 TO NODE 3109.00 IS CODE = 81	
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<	
MAINLINE TC(MIN) = 14.76	
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.334	
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 1.30 0.30 1.00 66	
"OPEN BRUSH" B 1.30 0.30 1.00 66 AGRICULTURAL FAIR COVER	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" B 6.30 0.30 1.00 69 NATURAL FAIR COVER	
"WOODLAND" B 0.20 0.30 1.00 60	
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" C 0.90 0.25 1.00 75	
NATURAL FAIR COVER	
"OPEN BRUSH" C 10.40 0.25 1.00 77 AGRICULTURAL FAIR COVER	
"PASTURE, DRYLAND" C 6.00 0.25 1.00 79	
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27	
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AREA(ACRES) = 25.10 SUBAREA RUNOFF(CFS) = 69.32	
EFFECTIVE AREA(ACRES) = 79.20 AREA-AVERAGED Fm(INCH/HR) = 0.27	
AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00	
TOTAL AREA(ACRES) = 79.20 PEAK FLOW RATE(CFS) = 218.68	

```
FLOW PROCESS FROM NODE 3108.00 TO NODE 3109.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
______
 MAINLINE Tc (MIN) = 14.76
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.334
 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
                c 0.30 0.25 1.00 73
 "WOODLAND"
 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) = 0.83
 EFFECTIVE AREA(ACRES) = 79.50 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 79.50 PEAK FLOW RATE (CFS) = 219.52
******************
FLOW PROCESS FROM NODE 3109.00 TO NODE 3110.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 950.00 DOWNSTREAM(FEET) = 890.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1548.00 CHANNEL SLOPE = 0.0388
 CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 219.52
 FLOW VELOCITY (FEET/SEC.) = 10.37 FLOW DEPTH (FEET) = 3.02
 TRAVEL TIME (MIN.) = 2.49 Tc (MIN.) = 17.25
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3110.00 = 4578.00 FEET.
FLOW PROCESS FROM NODE 3109.00 TO NODE 3110.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 17.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.048
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                              Fρ
                                     Ap SCS
    LAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                        5.50
                                0.30
                                       1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                   В
                      10.40
                              0.30
                                       1.00 69
 NATURAL FAIR COVER
 "WOODT AND"
                        2.20
                              0.30
                                      1.00 60
                   В
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                        3.80 0.25
                                     1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 22.10 0.25 1.00 77
 AGRICULTURAL FAIR COVER
                              0.25 1.00 79
 "PASTURE, DRYLAND" C
                        1.80
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 45.80 SUBAREA RUNOFF(CFS) = 114.52
 EFFECTIVE AREA(ACRES) = 125.30 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 125.30 PEAK FLOW RATE(CFS) = 313.56
 FLOW PROCESS FROM NODE 3110.00 TO NODE 3111.00 IS CODE = 51
______
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 890.00 DOWNSTREAM(FEET) = 850.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1572.00 CHANNEL SLOPE = 0.0254
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 313.56
 FLOW VELOCITY(FEET/SEC.) = 9.67 FLOW DEPTH(FEET) = 3.72 TRAVEL TIME(MIN.) = 2.71 Tc(MIN.) = 19.96
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3111.00 = 6150.00 FEET.
FLOW PROCESS FROM NODE 3110.00 TO NODE 3111.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 19.96
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.804
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.40
                                  0.30
                                         1.00
                  B
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          0.80
                                  0.30
                                         1.00
                                               66
                    В
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          9.40
                                  0.30
                                         1.00
 NATURAL FAIR COVER
 "WOODLAND"
                         1.60
                                 0.30
                                         1.00
                                               60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C
                         3.50 0.25 1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C 23.40 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) = 39.10 SUBAREA RUNOFF(CFS) = 89.31
 EFFECTIVE AREA(ACRES) = 164.40 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 164.40 PEAK FLOW RATE(CFS) = 375.31
.....
 FLOW PROCESS FROM NODE 3110.00 TO NODE 3111.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 19.96
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.804
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                         4.70 0.25 1.00 79
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 0.80 0.20 1.00
 NATURAL FAIR COVER
 "WOODLAND"
                   D 1.10 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) = 6.60 SUBAREA RUNOFF(CFS) = 15.25
 EFFECTIVE AREA(ACRES) = 171.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 171.00 PEAK FLOW RATE(CFS) = 390.57
FLOW PROCESS FROM NODE 3111.00 TO NODE 3112.00 IS CODE = 51
______
```

```
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 850.00 DOWNSTREAM(FEET) = 810.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1623.00 CHANNEL SLOPE = 0.0246
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 390.57
 FLOW VELOCITY (FEET/SEC.) = 10.13 FLOW DEPTH (FEET) = 4.19
 TRAVEL TIME (MIN.) = 2.67 Tc (MIN.) = 22.63
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3112.00 = 7773.00 FEET.
FLOW PROCESS FROM NODE 3111.00 TO NODE 3112.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 22.63
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.602
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap
                                              SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" B
                         1.50
                                 0.30
                                         0.50 56
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    В
                         3.10
                                0.30
                                        1.00 66
 AGRICULTURAL FAIR COVER
                       10.70
 "PASTURE, DRYLAND"
                                0.30
                                        1.00 69
 NATURAL FAIR COVER
                    B 0.40
 "WOODLAND"
                                 0.30
                                        1.00 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C 0.50 0.25 1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 16.70 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 32.90 SUBAREA RUNOFF(CFS) = 69.15
 EFFECTIVE AREA(ACRES) = 203.90 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 203.90 PEAK FLOW RATE (CFS) = 428.73
-----
 FLOW PROCESS FROM NODE 3111.00 TO NODE 3112.00 IS CODE = 81
._____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 22.63
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.602
 SUBAREA LOSS RATE DATA(AMC II):
                                       Ap SCS
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          2.30 0.25
                                        1.00 79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                   D 5.10 0.20
                                      0.50 75
 AGRICULTURAL FAIR COVER
                   D 0.90 0.20 1.00 84
 "PASTURE, DRYLAND"
 NATURAL FAIR COVER
 "WOODLAND"
                   D
                        0.40
                               0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.71
 SUBAREA AREA(ACRES) = 8.70 SUBAREA RUNOFF(CFS) = 19.17
 EFFECTIVE AREA(ACRES) = 212.60 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 212.60 PEAK FLOW RATE (CFS) = 447.89
*******************
```

```
FLOW PROCESS FROM NODE 3112.00 TO NODE 3113.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
ELEVATION DATA: UPSTREAM(FEET) = 810.00 DOWNSTREAM(FEET) = 770.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1754.00 CHANNEL SLOPE = 0.0228
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 447.89
 FLOW VELOCITY (FEET/SEC.) = 10.18 FLOW DEPTH (FEET) = 4.59
 TRAVEL TIME (MIN.) = 2.87 Tc (MIN.) = 25.50
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3113.00 = 9527.00 FEET.
******************
FLOW PROCESS FROM NODE 3112.00 TO NODE 3113.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 25.50
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.434
 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"
                  В
                          11.20
                                  0.30
                                         0.50
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          2.90
                                  0.30
                                         1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          10.30
                                  0.30
                                         1.00
                                               69
 NATURAL FAIR COVER
 "WOODLAND"
                         0.40
                                  0.30
                                         1.00
                                               60
 NATURAL FAIR COVER
 "GRASS"
                         1.10 0.25 1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 19.10 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.88
 SUBAREA AREA (ACRES) = 45.00 SUBAREA RUNOFF (CFS) = 88.85
 EFFECTIVE AREA(ACRES) = 257.60 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 257.60 PEAK FLOW RATE(CFS) =
******************
 FLOW PROCESS FROM NODE 3112.00 TO NODE 3113.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 25.50
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.434
 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"
                         4.00 0.25 1.00 79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 16.30 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
 SUBAREA AREA (ACRES) = 20.30 SUBAREA RUNOFF (CFS) = 42.10
 EFFECTIVE AREA(ACRES) = 277.90 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.94
 TOTAL AREA(ACRES) = 277.90 PEAK FLOW RATE(CFS) = 546.64
FLOW PROCESS FROM NODE 3113.00 TO NODE 3114.00 IS CODE = 51
______
```

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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 770.00 DOWNSTREAM(FEET) = 740.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1443.00 CHANNEL SLOPE = 0.0208
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 546.64
 FLOW VELOCITY (FEET/SEC.) = 10.33 FLOW DEPTH (FEET) = 4.87
 TRAVEL TIME (MIN.) = 2.33 Tc (MIN.) = 27.83
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3114.00 = 10970.00 FEET.
FLOW PROCESS FROM NODE 3113.00 TO NODE 3114.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 27.83
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.316
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap
                                             SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    TAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" B
                         8.10
                                 0.30
                                        0.50 56
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   В
                         1.20
                                0.30
                                        1.00 66
 AGRICULTURAL FAIR COVER
                       17.80
 "PASTURE, DRYLAND"
                                0.30
                                        1.00
 NATURAL FAIR COVER
 "WOODLAND"
                   В
                         2.00
                                 0.30
                                        1.00 60
 NATURAL FAIR COVER
 "GRASS"
                   C 0.20 0.25 1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C 7.00 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA(ACRES) = 36.30 SUBAREA RUNOFF(CFS) = 67.26
 EFFECTIVE AREA(ACRES) = 314.20 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.93
 TOTAL AREA (ACRES) = 314.20 PEAK FLOW RATE (CFS) = 584.27
-----
 FLOW PROCESS FROM NODE 3113.00 TO NODE 3114.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 27.83
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.316
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                         8.60 0.25
                                      1.00 79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 10.50 0.20 0.50 75
 NATURAL FAIR COVER
                        0.60 0.20 1.00 83
 "OPEN BRUSH"
                   D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.73
 SUBAREA AREA(ACRES) = 19.70 SUBAREA RUNOFF(CFS) = 38.07
 EFFECTIVE AREA(ACRES) = 333.90 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.92
 TOTAL AREA(ACRES) = 333.90 PEAK FLOW RATE(CFS) = 622.34
 FLOW PROCESS FROM NODE 3114.00 TO NODE 3135.00 IS CODE = 51
______
```

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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 740.00 DOWNSTREAM(FEET) = 710.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1534.00 CHANNEL SLOPE = 0.0196
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 622.34
 FLOW VELOCITY (FEET/SEC.) = 10.44 FLOW DEPTH (FEET) = 5.28
 TRAVEL TIME (MIN.) = 2.45 Tc (MIN.) = 30.28
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3135.00 = 12504.00 FEET.
FLOW PROCESS FROM NODE 3114.00 TO NODE 3135.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 30.28
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.209
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
    TAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                  В
                         4.30
                                0.30
                                       0.50
NATURAL FAIR COVER
 "OPEN BRUSH"
                         2.20
                                0.30
                                       1.00
                   В
                                             66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                         16.30
                                0.30
                                       1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         2.30
                                       1.00 77
                                0.25
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                        0.40
                              0.25 1.00 79
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 5.00 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.85
 SUBAREA AREA(ACRES) = 30.50 SUBAREA RUNOFF(CFS) = 54.01
 EFFECTIVE AREA(ACRES) = 364.40 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.91
 TOTAL AREA(ACRES) = 364.40 PEAK FLOW RATE(CFS) = 644.47
.....
 FLOW PROCESS FROM NODE 3114.00 TO NODE 3135.00 IS CODE = 81
-----
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 30.28
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.209
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
                  D 9.70 0.20 1.00 83
 "OPEN BRUSH"
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" D 1.80 0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 11.50 SUBAREA RUNOFF (CFS) = 20.80
 EFFECTIVE AREA(ACRES) = 375.90 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.92
TOTAL AREA(ACRES) = 375.90 PEAK FLOW RATE(CFS) = 665.26
*******************
 FLOW PROCESS FROM NODE 3135.00 TO NODE 3135.00 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.) = 30.28
 RAINFALL INTENSITY (INCH/HR) = 2.21
 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp (INCH/HR) = 0.26
 AREA-AVERAGED Ap = 0.92
 EFFECTIVE STREAM AREA(ACRES) = 375.90
 TOTAL STREAM AREA(ACRES) = 375.90
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 665.26
*******************
 FLOW PROCESS FROM NODE 3120.00 TO NODE 3121.00 IS CODE = 21
______
 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
______
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 313.00
 ELEVATION DATA: UPSTREAM(FEET) = 1215.00 DOWNSTREAM(FEET) = 1100.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 8.590
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.577
 SUBAREA To AND LOSS RATE DATA(AMC II):
                                  Fp
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                           Ap SCS Tc
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 NATURAL FAIR COVER
                     С
                           0.70
                                   0.25
                                            1.00 77 8.59
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF(CFS) = 2.73
 TOTAL AREA(ACRES) = 0.70 PEAK FLOW RATE(CFS) =
********************
 FLOW PROCESS FROM NODE 3121.00 TO NODE 3122.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1100.00 DOWNSTREAM(FEET) = 1060.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 261.00 CHANNEL SLOPE = 0.1533
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                            2.73
 FLOW VELOCITY (FEET/SEC.) = 5.65 FLOW DEPTH (FEET) = 0.36
 TRAVEL TIME (MIN.) = 0.77 Tc (MIN.) = 9.36
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3122.00 = 574.00 FEET.
************************
 FLOW PROCESS FROM NODE 3121.00 TO NODE 3122.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 9.36
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.350
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fp
                                           Аp
                                                  SCS
    LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                            0.10
                                            1.00 69
 "GRASS"
                     B
                                    0.30
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     в 0.70
                                  0.30
                                           1.00 66
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      С
                            0.60
                                   0.25
                                          1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 1.40 SUBAREA RUNOFF(CFS) = 5.13
```

```
EFFECTIVE AREA (ACRES) = 2.10 AREA-AVERAGED Fm(INCH/HR) = 0.27 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 2.10 PEAK FLOW RATE(CFS) =
.....
 FLOW PROCESS FROM NODE 3122.00 TO NODE 3123.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1060.00 DOWNSTREAM(FEET) = 1040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 137.00 CHANNEL SLOPE = 0.1460
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 7.71
 FLOW VELOCITY (FEET/SEC.) = 7.38 FLOW DEPTH (FEET) = 0.64
 TRAVEL TIME (MIN.) = 0.31 Tc (MIN.) = 9.67
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3123.00 = 711.00 FEET.
*****************
 FLOW PROCESS FROM NODE 3122.00 TO NODE 3123.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
______
 MAINLINE TC (MIN) = 9.67
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.258
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                 Fp
                                       Дp
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                          0.20
                                  0.30
                                         1 00
                                               69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    В
                         0.50 0.30 1.00
                                               66
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    С
                         1.20
                                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) = 1.90 SUBAREA RUNOFF(CFS) = 6.82
 EFFECTIVE AREA(ACRES) = 4.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 4.00 PEAK FLOW RATE(CFS) = 14.36
**********************
 FLOW PROCESS FROM NODE 3123.00 TO NODE 3124.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 1040.00 DOWNSTREAM(FEET) = 990.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 450.00 CHANNEL SLOPE = 0.1111
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 14.36
 FLOW VELOCITY (FEET/SEC.) = 7.84 FLOW DEPTH (FEET) = 0.94
 TRAVEL TIME (MIN.) = 0.96 Tc (MIN.) = 10.63
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3124.00 = 1161.00 FEET.
*****************
 FLOW PROCESS FROM NODE 3123.00 TO NODE 3124.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 10.63
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.035
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                       Ap SCS
                                 Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
```

NATURAL FAIR COVER					
"GRASS"	В	0.90	0.30	1.00	69
NATURAL FAIR COVER	2	0.30	0.00	1.00	
"OPEN BRUSH"	В	1.50	0.30	1.00	66
NATURAL FAIR COVER					
"WOODLAND"	В	0.20	0.30	1.00	60
NATURAL FAIR COVER					
"GRASS"	С	0.40	0.25	1.00	79
NATURAL FAIR COVER					
"OPEN BRUSH"	C	1.90	0.25	1.00	77
SUBAREA AVERAGE PERVIO					
SUBAREA AVERAGE PERVIO	OUS AREA FRA	ACTION, Ap	= 1.00		
SUBAREA AREA(ACRES) =	4.90	SUBAREA	RUNOFF (CFS	3) = 16.	57
EFFECTIVE AREA (ACRES)	= 8.90	O AREA-A	VERAGED Fm	(INCH/HR)	= 0.27
AREA-AVERAGED Fp(INCH/					
TOTAL AREA (ACRES) =					30 13
TOTHE INCHI(HORLE)	0.30			,	00.10
******	****	*****	*****	******	*****
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOII					
>>>>TRAVELTIME THRU S					
=======================================					========
ELEVATION DATA: UPSTRE					
CHANNEL LENGTH THRU SU					
CHANNEL BASE (FEET) =				01011	0.0001
MANNING'S FACTOR = 0.0				0.0	
CHANNEL FLOW THRU SUBA				. 0 0	
FLOW VELOCITY (FEET/SEC	1 - 7 3	20.13		- 1 26	
TEATTER TIME (MIN ) -	O 50 TO 1	Z FLOW L	EFID(FEEI)	- 1.20	
TRAVEL TIME (MIN.) = LONGEST FLOWPATH FROM				00 - 1410	00 5555
LONGESI FLOWPAIR FROM	NODE 312	0.00 IO NO	DE SIZS.	00 - 1413	.UU FEEI.
*****		++++++++	++++++++		+++++++++
FLOW PROCESS FROM NODE					
			2125 00 10	CODE -	
>>>>ADDITION OF SUBAR	REA TO MAIN	LINE PEAK	FLOW<		
>>>>ADDITION OF SUBAR	REA TO MAIN	LINE PEAK	FLOW<		
>>>>ADDITION OF SUBAR	REA TO MAIN	LINE PEAK	FLOW<<<<		
>>>>ADDITION OF SUBAR MAINLINE TC(MIN) = 11 * 100 YEAR RAINFALL IN	REA TO MAIN ====================================	LINE PEAK ======== CH/HR) =	FLOW<<<<		
>>>>ADDITION OF SUBAR MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA	REA TO MAIN  1.21  NTENSITY(ING A(AMC II):	LINE PEAK ======== CH/HR) =	FLOW<<<<		
>>>>ADDITION OF SUBAR MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/	REA TO MAIN: 1.21 NTENSITY(ING A(AMC II): SCS SOIL	LINE PEAK  CH/HR) =  AREA	FLOW<<<< =================================	Ap	SCS
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE	REA TO MAIN: 1.21 NTENSITY(ING A(AMC II): SCS SOIL	LINE PEAK  CH/HR) =  AREA	FLOW<<<<	Ap	SCS
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER	REA TO MAIN:  1.21  WTENSITY(ING A (AMC II):  SCS SOIL  GROUP	LINE PEAK  CH/HR) =  AREA (ACRES)	FLOW<<<< 3.917  Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
>>>>ADDITION OF SUBAR MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS"	REA TO MAIN:  1.21  WTENSITY(ING A (AMC II):  SCS SOIL  GROUP	LINE PEAK  CH/HR) =  AREA (ACRES)	FLOW<<<< =================================	Ap (DECIMAL)	SCS CN
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER	REA TO MAIN: 1.21 WTENSITY(IN: A(AMC II): SCS SOIL GROUP B	CH/HR) =  AREA (ACRES) 0.90	FLOW<<<< 3.917 Fp (INCH/HR) 0.30	Ap (DECIMAL)	SCS CN
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND"	REA TO MAIN:  1.21  WTENSITY(ING A (AMC II):  SCS SOIL  GROUP	CH/HR) =  AREA (ACRES)  0.90	FLOW<<<< 3.917 Fp (INCH/HR) 0.30	Ap (DECIMAL)	SCS CN
>>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER	REA TO MAIN:	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20	FLOW<<<< 3.917  Fp (INCH/HR)  0.30  0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 69
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	REA TO MAIN:	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20	FLOW<<<< 3.917  Fp (INCH/HR)  0.30  0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 69
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER	REA TO MAIN:  1.21  VTENSITY(IN: A(AMC II): SCS SOIL GROUP  B  B  C	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25	Ap (DECIMAL) 1.00 1.00	SCS CN 69 60
>>>>ADDITION OF SUBAR  ***ANAINLINE TC (MIN) = 11  ***100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS"	REA TO MAIN:  1.21  VTENSITY(IN: A(AMC II): SCS SOIL GROUP  B  B  C	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80	FLOW<<<< 3.917  Fp (INCH/HR)  0.30  0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 69 60
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS"	REA TO MAIN: 1.21 VTENSITY(ING A(AMC II): SCS SOIL GROUP B B C C	LINE PEAK	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25 0.25	Ap (DECIMAL) 1.00 1.00 1.00	SCS CN 69 60 75
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH"	REA TO MAIN: 1.21 VTENSITY(ING A(AMC II): SCS SOIL GROUP B B C C	LINE PEAK	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25	Ap (DECIMAL) 1.00 1.00 1.00	SCS CN 69 60 75
>>>>ADDITION OF SUBAR  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER	REA TO MAIN: 1.21 VTENSITY(ING A(AMC II): SCS SOIL GROUP B B C C	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25 0.25	Ap (DECIMAL) 1.00 1.00 1.00 1.00	SCS CN 69 60 75 79
>>>>ADDITION OF SUBAR	REA TO MAIN:  1.21  VIENSITY(IN: A(AMC II): SCS SOIL GROUP  B  C  C  C	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80  0.10	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25 0.25 0.25	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 1.00	SCS CN 69 60 75 79
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVICE	REA TO MAIN:	LINE PEAK	FLOW<<<<< 3.917 Fp (INCH/HR) 0.30 0.30 0.25 0.25 0.25 H/HR) = 0.	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 1.00	SCS CN 69 60 75 79
>>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<<< ================================	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 26	SCS CN 69 60 75 79 77
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVICE	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<<< ================================	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00 26	SCS CN 69 60 75 79 77
>>>>ADDITION OF SUBARE  ***********************************	REA TO MAIN:	LINE PEAK	FLOW<<<<<================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR)	SCS CN 69 60 75 79 77 73
>>>>ADDITION OF SUBARE MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA AVERAGE PERVIC SUBAREA AREA (ACRES) EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH)	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<< =================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00	SCS CN 69 60 75 79 77 73
>>>>ADDITION OF SUBARE  ***********************************	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<< =================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00	SCS CN 69 60 75 79 77 73
>>>>ADDITION OF SUBARE MAINLINE TC (MIN) = 11 * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA AVERAGE PERVIC SUBAREA AREA (ACRES) EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH)	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<< =================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00	SCS CN 69 60 75 79 77 73
>>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS"  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS"  NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE SUBAREA AREA (ACRES) EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH)	REA TO MAIN: ====================================	LINE PEAK	FLOW<<<<< ================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  26  8) = 12. (INCH/HR) = 1.00 TS) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA AVERAGE PE PERVIC SUBAREA AVERAGE PE PERVIC SUBAREA AVERAGE PERVIC SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH/ TOTAL AREA (ACRES) =	REA TO MAIN:	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80  0.10  TE, FP(INC ACTION, AP SUBAREA 0 AREA-A 7 AREA-AV PEAK F	FLOW<<<<< ================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00 TS) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE SUBAREA AVERAGE PERVICE SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) AREA-AVERAGED FP (INCH/ TOTAL AREA (ACRES) =	REA TO MAIN:	LINE PEAK	FLOW<<<<< ================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00 rs) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA FAIR SUBAREA (ACRES) =  ***********************************	TEA TO MAIN:    Comparison of the comparison of	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80  0.10  TE, Fp(INC ACTION, Ap SUBAREA 0 AREA-AV PEAK F  ***********************************	FLOW<-<- TABLE TO THE PROOF TO	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00 rs) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS"  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS"  NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA FAIR COVER "WOODLAND"	TEA TO MAIN:  ===================================	LINE PEAK	FLOW<<<<<================================	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  3) = 12. (INCH/HR) = 1.00 rs) =	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01
>>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 11  * 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "WOODLAND" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIC SUBAREA AVERAGE FO (INCH TOTAL AREA (ACRES) =  ***********************************	REA TO MAIN:  1.21  VITENSITY(ING A(AMC II): SCS SOIL GROUP  B  C  C  C  C  C  C  C  C  C  C  C  C	LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  0.20  0.80  0.10  1.80  0.10  TE, FP(INC ACTION, AP SUBAREA 0 AREA-AV PEAK F  ***********  TO NODE  FLOW<<<< </td <td>FLOW&lt;-&lt;- "TOW&lt;</td> <td>Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  S) = 12. (INCH/HR) = 1.00 FS) =  ***********************************</td> <td>SCS CN 69 60 75 79 77 73 82 = 0.27 42.01 ************************************</td>	FLOW<-<- "TOW<	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  26  S) = 12. (INCH/HR) = 1.00 FS) =  ***********************************	SCS CN 69 60 75 79 77 73 82 = 0.27 42.01 ************************************

```
ELEVATION DATA: UPSTREAM(FEET) = 975.00 DOWNSTREAM(FEET) = 970.0 CHANNEL LENGTH THRU SUBAREA(FEET) = 109.00 CHANNEL SLOPE = 0.0459
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 42.01
 FLOW VELOCITY (FEET/SEC.) = 7.31 FLOW DEPTH (FEET) = 1.60
 TRAVEL TIME (MIN.) = 0.25 Tc (MIN.) = 11.46
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3126.00 = 1528.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3125.00 TO NODE 3126.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 11.46
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.868
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fρ
                                        Ap SCS
   LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.10
                                  0.30
                                        1.00
                                               6.3
 NATURAL FAIR COVER
 "GRASS"
                         1.30 0.30
                                        1.00
                    В
                                               69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          0.90 0.30
                    В
                                        1 00
                                               66
 AGRICULTURAL FAIR COVER
                          0.10
                                0.30
 "PASTURE, DRYLAND" B
                                         1.00
 NATURAL FAIR COVER
 "WOODLAND"
                         1.10 0.30 1.00
                                               60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C
                        0.60
                                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) = 4.10 SUBAREA RUNOFF (CFS) = 13.19
 EFFECTIVE AREA(ACRES) = 16.90 AREA-AVERAGED Fm(INCH/HR) = 0.28
 AREA-AVERAGED Fp(INCH/HR) = 0.28 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 16.90 PEAK FLOW RATE(CFS) = 54.63
*******************
 FLOW PROCESS FROM NODE 3125.00 TO NODE 3126.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 11.46
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.868
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                        Ap
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "GRASS"
                         0.40 0.25 1.00 79
 NATURAL FAIR COVER
                         4.00 0.25 1.00 77
 "OPEN BRUSH"
 NATURAL FAIR COVER
 "WOODLAND"
                   C
                         0.30 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) = 4.70 SUBAREA RUNOFF(CFS) = 15.30
 EFFECTIVE AREA(ACRES) = 21.60 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 21.60 PEAK FLOW RATE(CFS) =
                                            69 94
*****************
 FLOW PROCESS FROM NODE 3126.00 TO NODE 3127.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
```

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ELEVATION DATA: UPSTREAM(FEET) = 970.00 DOWNSTREAM(FEET) = 940.0 CHANNEL LENGTH THRU SUBAREA(FEET) = 696.00 CHANNEL SLOPE = 0.0431
                                                     940.00
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                             69.94
 FLOW VELOCITY (FEET/SEC.) = 8.06 FLOW DEPTH (FEET) = 1.81
 TRAVEL TIME (MIN.) = 1.44 Tc (MIN.) = 12.90
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3127.00 = 2224.00 FEET.
******************
 FLOW PROCESS FROM NODE 3126.00 TO NODE 3127.00 IS CODE = 81
-----
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 12.90
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.602
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                    SCS SOIL AREA
                                    Fp
                                             Ap
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                             2.70
                                     0.30
                                             1.00
                                                    63
 AGRICULTURAL FAIR COVER
                             1.50
 "PASTURE, DRYLAND"
                      В
                                     0.30
                                             1.00
                                                   69
 NATURAL FAIR COVER
                             0.50
                                     0.30
 "MOODT.AND"
                                             1.00
                      B
                                                   60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                             2.60
                                     0.25
                                             1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      C
                             1.80
                                     0.25
                                             1.00
                                                   77
 NATURAL FAIR COVER
                      C
                             0.20
                                     0.25
                                             1.00 73
 "WOODLAND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 9.30
                            SUBAREA RUNOFF(CFS) = 27.85
 EFFECTIVE AREA(ACRES) = 30.90 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 30.90
                            PEAK FLOW RATE(CFS) =
                                                   92.62
******************
 FLOW PROCESS FROM NODE 3127.00 TO NODE 3128.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <><<
-----
 ELEVATION DATA: UPSTREAM(FEET) = 940.00 DOWNSTREAM(FEET) = 920.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 511.00 CHANNEL SLOPE = 0.0391
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                             92.62
 FLOW VELOCITY (FEET/SEC.) = 8.38 FLOW DEPTH (FEET) = 2.15
 TRAVEL TIME (MIN.) = 1.02 Tc (MIN.) = 13.92
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3128.00 = 2735.00 FEET.
*************************
 FLOW PROCESS FROM NODE 3127.00 TO NODE 3128.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 13.92
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.456
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                    Fρ
                                            Αp
                                                   SCS
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                      В
                             3.00
                                     0.30
                                             1.00
                                                   63
 NATURAL FAIR COVER
 "OPEN BRUSH"
                             1.40
                                     0.30
                                             1.00
                      В
                                                    66
```

AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" B 8.40 0.30 1.00 69	
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 5.20 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) = 26.20 SUBAREA RUNOFF (CFS) = 75.01	
SUBAREA AREA(ACRES) = 26.20 SUBAREA RUNOFF(CFS) = 75.01 EFFECTIVE AREA(ACRES) = 57.10 AREA-AVERAGED Fm(INCH/HR) = 0.27	
AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00 TOTAL AREA(ACRES) = 57.10 PEAK FLOW RATE(CFS) = 163.57	
******************	* *
FLOW PROCESS FROM NODE 3127.00 TO NODE 3128.00 IS CODE = 81	
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<	
MAINLINE TC(MIN) = 13.92	==
* 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	
AGRICULTURAL FAIR COVER	
"PASTURE, DRYLAND" C 1.00 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) = 1.50 SUBAREA RUNOFF(CFS) = 4.33 EFFECTIVE AREA(ACRES) = 58.60 AREA-AVERAGED Fm(INCH/HR) = 0.27	
AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00	
TOTAL AREA(ACRES) = 58.60 PEAK FLOW RATE(CFS) = 167.90	
**********************	* *
FLOW PROCESS FROM NODE 3128.00 TO NODE 3129.00 IS CODE = 51	
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<	
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>	
ELEVATION DATA: UPSTREAM(FEET) = 920.00 DOWNSTREAM(FEET) = 870.00	==
CHANNEL LENGTH THRU SUBAREA (FEET) = 980.00 CHANNEL SLOPE = 0.0510	
CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000	
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 3.00 CHANNEL FLOW THRU SUBAREA(CFS) = 167.90	
FLOW VELOCITY (FEET/SEC.) = 10.79 FLOW DEPTH (FEET) = 2.72	
TRAVEL TIME (MIN.) = 1.51 Tc (MIN.) = 15.43	
LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3129.00 = 3715.00 FEET.	
*************************	* *
FLOW PROCESS FROM NODE 3128.00 TO NODE 3129.00 IS CODE = 81	
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<	
	==
MAINLINE Tc(MIN) = 15.43 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.252	
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 0.90 0.30 1.00 63	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" B 11.50 0.30 1.00 69	
NATURAL FAIR COVER	
THE COURT CONTRACTOR OF THE CO	

NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	С	2.10	0.25	1.00	75	
NATURAL FAIR COVER "OPEN BRUSH"		7.30	0.25	1.00	77	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	C		0.25		79	
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS	AREA FR	ACTION, A	0 = 1.00		2.1	
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	87.4	SUBAREA AREA-	A RUNOFF (CF AVERAGED Fm	(INCH/HR)	= 0.27	
AREA-AVERAGED Fp(INCH/HF	R) = 0.2	7 AREA-A	VERAGED Ap	= 1.00		
TOTAL AREA(ACRES) =						
**************************************	3128.00	TO NODE	3129.00 I	S CODE =	81	
>>>>ADDITION OF SUBAREA						
MAINLINE TC(MIN) = 15.4	13					
* 100 YEAR RAINFALL INTE			3.252			
SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/	SCS SOIL	AREA	Fρ	Ap	SCS	
DEVELOPMENT TYPE/ LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
NATURAL FAIR COVER "WOODLAND"	C	2 20	0.25	1 00	72	
SUBAREA AVERAGE PERVIOUS					73	
SUBAREA AVERAGE PERVIOUS	AREA FR	ACTION, A	p = 1.00			
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	3.30	SUBARE	A RUNOFF(CF	S) = 8.	92	
AREA-AVERAGED Fp(INCH/HF	R) = 0.2	7 AREA-A	VERAGED Ap	= 1.00		
TOTAL AREA (ACRES) =	90.70	PEAK 1	FLOW RATE (C	FS) =	243.25	
*******	. * * * * * * * * *	******	*****	******	*****	
FLOW PROCESS FROM NODE						
>>>>COMPUTE TRAPEZOIDAI >>>>TRAVELTIME THRU SUE	BAREA (EX	ISTING EL	EMENT) <<<<			
ELEVATION DATA: UPSTREAM						
CHANNEL LENGTH THRU SUBA	REA (FEET	918	.00 CHANN			
CHANNEL BASE (FEET) =				0.0		
MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE				.00		
FLOW VELOCITY (FEET/SEC.)	= 9.9	FLOW I	DEPTH (FEET)	= 3.32		
TRAVEL TIME $(MIN.) = 1$ .	53 Tc(1	MIN.) = 0	16.96		00 5555	
LONGEST FLOWPATH FROM NO	)DE 312	J.00 TO NO	JDE 3130.	00 = 4633	.UU FEET.	
********	****					
FLOW PROCESS FROM NODE		TO NODE	3130.00 I	S CODE =	81	
>>>>ADDITION OF SUBAREA	TO MAIN	TO NODE	3130.00 I FLOW<	S CODE =	81	
>>>>ADDITION OF SUBAREA	TO MAIN	TO NODE	3130.00 I FLOW<	S CODE =	81	
>>>>ADDITION OF SUBAREA	TO MAIN	TO NODE	3130.00 I	S CODE =	81	
>>>>ADDITION OF SUBAREA ====================================	TO MAINE TO	TO NODE LINE PEAK CH/HR) =	3130.00 I	S CODE =	81	
>>>>ADDITION OF SUBAREA MAINLINE TC (MIN) = 16.5 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/	TO MAIN	TO NODE LINE PEAK CH/HR) = AREA	3130.00 I FLOW<>>> 3.080	S CODE =	81  SCS	
>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 16.5  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE	TO MAINE TO	TO NODE LINE PEAK CH/HR) =	3130.00 I FLOW<>>> 3.080	S CODE =	81  SCS	
>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 16.5  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	TO MAIN	TO NODE LINE PEAK CH/HR) = AREA	3130.00 I FLOW<>>> 3.080	S CODE =	81  SCS	
>>>>ADDITION OF SUBAREA	A TO MAIN: OF TO M	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.90	3130.00 I FLOW<<<< 3.080 Fp (INCH/HR) 0.30	Ap (DECIMAL)	81  SCS CN 63	
>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 16.5  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "OPEN BRUSH"	A TO MAIN:  66 CNSITY(ING AMC II): SCS SOIL GROUP	TO NODE LINE PEAK CH/HR) = AREA (ACRES)	3130.00 I FLOW<><< 3.080 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	
>>>> ADDITION OF SUBAREA  ***TON YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	A TO MAIN: OF TO M	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.90	3130.00 I FLOW<<<< 3.080 Fp (INCH/HR) 0.30	Ap (DECIMAL)	81  SCS CN 63	
>>>>>ADDITION OF SUBAREA	A TO MAIN:  106  10NSITY(IN  11):  11 SCS SOIL  12 GROUP  13 B  14 B  15 B	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.90 1.80 26.80	3130.00 I FLOW<<<< 3.080 Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 63 66	
>>>> ADDITION OF SUBAREA  ***TON YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	A TO MAIN: 06 NNSITY(ING MC II): SCS SOIL GROUP B B	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.90  1.80	3130.00 I FLOW<<<< 3.080 Fp (INCH/HR) 0.30 0.30	Ap (DECIMAL) 1.00	SCS CN 63	

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NATURAL FAIR COVER
                         14.60 0.25 1.00 77
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 55.40 SUBAREA RUNOFF(CFS) = 139.73
 EFFECTIVE AREA(ACRES) = 146.10 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 146.10 PEAK FLOW RATE (CFS) =
******************
 FLOW PROCESS FROM NODE 3129.00 TO NODE 3130.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC(MIN) = 16.96
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.080
 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
                         7.00 0.25 1.00 79
 "PASTURE, DRYLAND"
                C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 7.00 SUBAREA RUNOFF(CFS) = 17.83
 EFFECTIVE AREA(ACRES) = 153.10 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp (INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 153.10 PEAK FLOW RATE(CFS) = 386.81
*******************
 FLOW PROCESS FROM NODE 3130.00 TO NODE 3131.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 840.00 DOWNSTREAM(FEET) = 820.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 882.00 CHANNEL SLOPE = 0.0227
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 386.81
 FLOW VELOCITY (FEET/SEC.) = 9.80 FLOW DEPTH (FEET) = 4.26
 TRAVEL TIME (MIN.) = 1.50 Tc (MIN.) = 18.46
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3131.00 = 5515.00 FEET.
*****
 FLOW PROCESS FROM NODE 3130.00 TO NODE 3131.00 IS CODE = 81
._____
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 18.46
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.935
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fo
                                        Ap SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           2.80
                                  0.30
                                          1.00
 AGRICULTURAL FAIR COVER
                          22.40
                                  0.30
 "PASTURE, DRYLAND"
                                          1.00
                                                69
 NATURAL FAIR COVER
 "WOODLAND"
                           2.00
                                  0.30
                                         1 00
                                                60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          4.90
                                  0.25
                                          1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          20.20
                                  0.25
                                         1.00 77
 AGRICULTURAL FAIR COVER
                    С
                                  0.25 1.00 79
 "PASTURE, DRYLAND"
                           9.80
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
```

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SUBAREA AREA(ACRES) = 62.10 SUBAREA RUNOFF(CFS) = 148.86 EFFECTIVE AREA(ACRES) = 215.20 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 215.20
                          PEAK FLOW RATE(CFS) = 515.70
FLOW PROCESS FROM NODE 3130.00 TO NODE 3131.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TO (MIN) = 18 46
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.935
 SUBAREA LOSS RATE DATA(AMC II):
                SCS SOIL AREA
                                 Fp Ap SCS
  DEVELOPMENT TYPE/
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                                 0.25 1.00 73
 "WOODLAND"
                     C
                          1.80
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 1.80
                           SUBAREA RUNOFF(CFS) = 4.35
 EFFECTIVE AREA(ACRES) = 217.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 217.00 PEAK FLOW RATE(CFS) = 520.05
********************
 FLOW PROCESS FROM NODE 3131.00 TO NODE 3132.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 820.00 DOWNSTREAM(FEET) = 800.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 901.00 CHANNEL SLOPE = 0.0222
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 520.05
 FLOW VELOCITY (FEET/SEC.) = 10.47 FLOW DEPTH (FEET) = 4.98
 TRAVEL TIME (MIN.) = 1.43 Tc (MIN.) = 19.90
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3132.00 = 6416.00 FEET.
*****
 FLOW PROCESS FROM NODE 3131.00 TO NODE 3132.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
.______
 MAINLINE Tc (MIN) = 19.90
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.809
 SUBAREA LOSS RATE DATA(AMC II):
                                          Ap SCS
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           0.90
                     В
                                    0.30
                                           1.00 63
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     B
                           4.00
                                    0.30
                                           1.00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           25.00
                                    0.30
                                           1.00
 NATURAL FAIR COVER
                           1.80
 "WOODLAND"
                     B
                                    0.30
                                           1.00 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           3.90
                                 0.25
                     C
                                         1.00 75
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          24.80
                                  0.25 1.00 77
                     C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 60.40 SUBAREA RUNOFF(CFS) = 137.69
 EFFECTIVE AREA(ACRES) = 277.40 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 277.40 PEAK FLOW RATE(CFS) =
                                                633.09
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*****
FLOW PROCESS FROM NODE 3131.00 TO NODE 3132.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
______
 MAINIJINE\ Tc(MIN) = 19.90
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.809
 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
                       11.10 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) = 11.10 SUBAREA RUNOFF(CFS) = 25.57
 EFFECTIVE AREA(ACRES) = 288.50 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 288.50 PEAK FLOW RATE(CFS) = 658.66
*******************
FLOW PROCESS FROM NODE 3132.00 TO NODE 3133.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 800.00 DOWNSTREAM(FEET) = 780.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 940.00 CHANNEL SLOPE = 0.0213
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 658.66
 FLOW VELOCITY (FEET/SEC.) = 10.93 FLOW DEPTH (FEET) = 5.32
 TRAVEL TIME (MIN.) = 1.43 Tc (MIN.) = 21.33
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3133.00 = 7356.00 FEET.
FLOW PROCESS FROM NODE 3132.00 TO NODE 3133.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 21.33
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.699
 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"
                          2.50
                                 0.30
                                        1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    В
                         22.20
                                 0.30
                                       1.00
                                             69
 NATURAL FAIR COVER
 "GRASS"
                   C
                        0.40
                               0.25
                                      1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         20.10 0.25 1.00 77
 AGRICULTURAL FAIR COVER
                  C
                        6.60 0.25 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 51.80 SUBAREA RUNOFF(CFS) = 113.06
 EFFECTIVE AREA(ACRES) = 340.30 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 340.30 PEAK FLOW RATE(CFS) = 743.11
******************
 FLOW PROCESS FROM NODE 3133.00 TO NODE 3134.00 IS CODE = 51
______
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
```

```
______
 ELEVATION DATA: UPSTREAM(FEET) = 780.00 DOWNSTREAM(FEET) = 765.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 596.00 CHANNEL SLOPE = 0.0252
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 743.11
 FLOW VELOCITY (FEET/SEC.) = 12.00 FLOW DEPTH (FEET) = 5.42
 TRAVEL TIME (MIN.) = 0.83 Tc (MIN.) = 22.16
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3134.00 = 7952.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3133.00 TO NODE 3134.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 22.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.636
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   В
                         15.60
                                  0.30
                                         1.00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                   B 55.20
                                  0.30
                                         1 00 69
 NATURAL FAIR COVER
 "WOODLAND"
                   В
                         3.60
                                  0.30
                                         1.00 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                   C
                         0.10
                                0.25
                                         1.00
                                               7.5
 NATURAL FAIR COVER
                   C 75.10
                               0.25 1.00 77
 "OPEN BRUSH"
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                        28.10 0.25 1.00 79
                   C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 177.70 SUBAREA RUNOFF(CFS) = 378.26
 EFFECTIVE AREA(ACRES) = 518.00 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 518.00 PEAK FLOW RATE(CFS) = 1102.10
*****
 FLOW PROCESS FROM NODE 3133.00 TO NODE 3134.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
-----
 MAINLINE Tc (MIN) = 22.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.636
 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
                 С
                         1.50 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) = 1.50 SUBAREA RUNOFF (CFS) = 3.22
 EFFECTIVE AREA(ACRES) = 519.50 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 519.50 PEAK FLOW RATE (CFS) = 1105.32
*******************
 FLOW PROCESS FROM NODE 3134.00 TO NODE 3135.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
-----
 ELEVATION DATA: UPSTREAM(FEET) = 765.00 DOWNSTREAM(FEET) = 710.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 2076.00 CHANNEL SLOPE = 0.0265
 CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
```

```
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1105.32
 FLOW VELOCITY (FEET/SEC.) = 13.51 FLOW DEPTH (FEET) = 6.20
 TRAVEL TIME (MIN.) = 2.56 Tc (MIN.) = 24.72
 LONGEST FLOWPATH FROM NODE 3120.00 TO NODE 3135.00 = 10028.00 FEET.
*******************
FLOW PROCESS FROM NODE 3134.00 TO NODE 3135.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 24.72
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.477
 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"
                              4 10
                                       0.30
                                               1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                              39 20
                                      0.30
                                              1 00
                                                      69
 NATURAL FAIR COVER
 "WOODLAND"
                             0.40
                                     0.30
                                              1.00
 NATURAL FAIR COVER
 "OPEN BRUSH" C 26.40 0.25 1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C 7.10 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) = 77.20 SUBAREA RUNOFF(CFS) = 152.76
 EFFECTIVE AREA(ACRES) = 596.70 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 596.70 PEAK FLOW RATE(CFS) = 1183.64
*******************
FLOW PROCESS FROM NODE 3135.00 TO NODE 3135.00 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.) = 24.72
 RAINFALL INTENSITY (INCH/HR) = 2.48
 AREA-AVERAGED Fm(INCH/HR) = 0.27
 AREA-AVERAGED Fp (INCH/HR) = 0.27
 AREA-AVERAGED Ap = 1.00
 EFFECTIVE STREAM AREA(ACRES) = 596.70
 TOTAL STREAM AREA(ACRES) = 596.70
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 1183.64
 ** CONFLUENCE DATA **
  STREAM Q TC Intensity Fp(Fm) Ap Ae HEADWATER NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
  1 665.26 30.28 2.209 0.26(0.24) 0.92 375.9 3100.00
   2 1183.64 24.72 2.477 0.27(0.27) 1.00 596.7 3120.00
 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 1800.61 24.72 2.477 0.27(0.26) 0.97 903.6 3120.00
2 1705.26 30.28 2.209 0.27(0.26) 0.97 972.6 3100.00
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE (CFS) = 1800.61 Tc (MIN.) = 24.72
```

```
EFFECTIVE AREA(ACRES) = 903.57 AREA-AVERAGED Fm(INCH/HR) = 0.26
AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 972.60
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3135.00 = 12504.00 FEET.
FLOW PROCESS FROM NODE 3135.00 TO NODE 3136.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 710.00 DOWNSTREAM(FEET) = 690.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1157.00 CHANNEL SLOPE = 0.0173
 CHANNEL BASE (FEET) = 9.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 9.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1800.61
 FLOW VELOCITY (FEET/SEC.) = 13.00 FLOW DEPTH (FEET) = 8.10
 TRAVEL TIME (MIN.) = 1.48 Tc (MIN.) = 26.20
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3136.00 = 13661.00 FEET.
*****
 FLOW PROCESS FROM NODE 3135.00 TO NODE 3136.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 26.20
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.397
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 RESIDENTIAL.
 "5-7 DWELLINGS/ACRE"
                  B
                           6.80
                                   0.30
                                           0.50
                                                 56
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          3.20
                                   0.30
                    B
                                          1 00 66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     в 28.90
                                   0.30
                                          1 00
 NATURAL FAIR COVER
 "MOODI.AND"
                    в 0.40
                                   0.30
                                          1.00 60
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C
                          4.50
                                   0.25
                                         1.00 77
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                          2.90
                                 0.20 0.50 75
                   D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.90
 SUBAREA AREA(ACRES) = 46.70 SUBAREA RUNOFF(CFS) = 89.80
 EFFECTIVE AREA(ACRES) = 950.27 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1019.30
                           PEAK FLOW RATE(CFS) = 1825.86
*******************
 FLOW PROCESS FROM NODE 3135.00 TO NODE 3136.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 26.20
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.397
 SUBAREA LOSS RATE DATA(AMC II):
                                Fp
                                         Ap
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                    D 11.70
                                   0.20
 "OPEN BRUSH"
                                           1.00 83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     D
                          9.10
                                 0.20
                                         1.00 84
 NATURAL FAIR COVER
                                 0.20 1.00 79
 "WOODLAND"
                     D
                          0.20
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
```

```
SUBAREA AREA(ACRES) = 21.00 SUBAREA RUNOFF(CFS) = 41.53 EFFECTIVE AREA(ACRES) = 971.27 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 1040.30 PEAK FLOW RATE (CFS) = 1867.40
FLOW PROCESS FROM NODE 3136.00 TO NODE 3137.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 690.00 DOWNSTREAM(FEET) = 685.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 609.00 CHANNEL SLOPE = 0.0082
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1867.40
 FLOW VELOCITY (FEET/SEC.) = 9.92 FLOW DEPTH (FEET) = 9.60
 TRAVEL TIME (MIN.) = 1.02 Tc (MIN.) = 27.22
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3137.00 = 14270.00 FEET.
*****
 FLOW PROCESS FROM NODE 3136.00 TO NODE 3137.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 27.22
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.344
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                            5 80
                                    0.30
                                           0.50
                     B
 NATURAL FAIR COVER
 "GRASS"
                            0.40
                                   0.30
                                           1.00
                                                 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            3 80
                                   0.30
                                           1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           32.50 0.30
                                          1.00
                                                 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           29.80 0.25 1.00 77
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND" C
                           3.60
                                 0.25 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96
 SUBAREA AREA(ACRES) = 75.90 SUBAREA RUNOFF(CFS) = 141.93
 EFFECTIVE AREA(ACRES) = 1047.17 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1116.20
                           PEAK FLOW RATE(CFS) = 1962.84
******************
FLOW PROCESS FROM NODE 3136.00 TO NODE 3137.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 27.22
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.344
 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"
                            0.40
                                    0.20
                                           0.50 75
                     D
 NATURAL FAIR COVER
 "GRASS"
                     D
                            0.40
                                    0.20
                                           1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           10.30
                                    0.20
                                           1.00
                                                 8.3
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           11.00
                                    0.20
                                           1.00 84
```

```
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 22.10 SUBAREA RUNOFF(CFS) = 42.69
 EFFECTIVE AREA(ACRES) = 1069.27 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 1138.30
                          PEAK FLOW RATE(CFS) = 2005.52
FLOW PROCESS FROM NODE 3137.00 TO NODE 3138.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 685.00 DOWNSTREAM(FEET) = 675.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 740.00 CHANNEL SLOPE = 0.0135
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2005.52
 FLOW VELOCITY (FEET/SEC.) = 12.17 FLOW DEPTH (FEET) = 8.78
 TRAVEL TIME (MIN.) = 1.01 Tc (MIN.) = 28.24
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3138.00 = 15010.00 FEET.
*****
 FLOW PROCESS FROM NODE 3137.00 TO NODE 3138.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 28.24
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.298
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                        Ap
                                  Fp
                                               SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                          20.70
                                   0.30
                                          0.50
                  B
                                                56
 NATURAL FAIR COVER
                          1.50
                                   0.30
                                          1 00
                                                66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                     в 6.20
                                   0.30
                                          1.00
                                                69
 NATURAL FAIR COVER
                          0.40
 "OPEN BRUSH"
                    C
                                   0.25
                                          1.00
                                                77
 RESIDENTIAL.
 "5-7 DWELLINGS/ACRE" D
                        11.70
                                   0.20
                                         0.50
                                                7.5
 NATURAL FAIR COVER
 "GRASS"
                    D
                           2.10
                                  0.20
                                        1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.27
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.62
 SUBAREA AREA(ACRES) = 42.60 SUBAREA RUNOFF(CFS) = 81.69
 EFFECTIVE AREA(ACRES) = 1111.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1180.90
                          PEAK FLOW RATE (CFS) = 2042.18
******************
 FLOW PROCESS FROM NODE 3137.00 TO NODE 3138.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 28.24
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.298
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                         Ap
                                               SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    D
                        12.40
                                0.20
                                        1.00 83
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    D 3.30
                                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) = 15.70 SUBAREA RUNOFF(CFS) = 29.64
EFFECTIVE AREA(ACRES) = 1127.57 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA (ACRES) = 1196.60 PEAK FLOW RATE (CFS) = 2071.82
FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 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) = 977.00 CHANNEL SLOPE = 0.0205
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2071.82
 FLOW VELOCITY (FEET/SEC.) = 14.33 FLOW DEPTH (FEET) = 8.02
 TRAVEL TIME (MIN.) = 1.14 Tc (MIN.) = 29.37
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3139.00 = 15987.00 FEET.
*****
 FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 29.37
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.248
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fp
                                         αA
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                            0 40
                                    0.30
                                           1.00
                     B
                                                  63
 AGRICULTURAL POOR COVER
 "FALLOW"
                            8.60
                                   0.30
                                           1.00
                                                 86
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                          1 00 0 30
                                           0.50
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     в 9.70 0.30 1.00
                                                  66
 COMMERCIAL
                          5.60 0.30 0.10
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    В
                          12.10
                                 0.30 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.85
 SUBAREA AREA(ACRES) = 37.40 SUBAREA RUNOFF(CFS) = 67.05
 EFFECTIVE AREA(ACRES) = 1164.97 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1234.00 PEAK FLOW RATE(CFS) = 2088.12
*****
 FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 29.37
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.248
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                  Fp
                                          Aр
                                                 SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "WOODLAND"
                            0.20
                                    0.30
                                           1 00
                                                  60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                            5.40
                                   0.25
                                           1.00
                                                75
 AGRICULTURAL POOR COVER
 "FALLOW"
                            1.30
                                    0.25
                                           1.00
                                                  91
 NATURAL POOR COVER
 "BARREN"
                            4.00 0.25
                                         1.00 91
 NATURAL FAIR COVER
```

```
"OPEN BRUSH"
                    С
                          20.10
                                  0.25
                                         1.00
                                  0.25 1.00
0.25 0.10
                           2.70
 COMMERCIAL
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
 SUBAREA AREA(ACRES) = 33.70 SUBAREA RUNOFF(CFS) = 61.12
 EFFECTIVE AREA(ACRES) = 1198.67 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1267.70 PEAK FLOW RATE(CFS) = 2149.24
******************
 FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 29.37
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.248
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                Fp
                                              SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                                  0.25
                                               79
                          1.10
                                         1.00
 NATURAL FAIR COVER
                         2.80
                    C
                                0.25
                                        1.00
                                               7.3
 AGRICULTURAL POOR COVER
                                               94
 "FALLOW"
                         2.20
                                  0.20
                                        1.00
 NATURAL FAIR COVER
                         1 90
                                0.20
                                       1 00 84
 "GRASS"
                    D
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    D
                        17.50
                                0.20
                                        1.00 83
                                0.20 0.10 75
 COMMERCIAL
                    D
                         2.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
 SUBAREA AREA(ACRES) = 27.50 SUBAREA RUNOFF(CFS) = 50.82
 EFFECTIVE AREA(ACRES) = 1226.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1295.20
                         PEAK FLOW RATE(CFS) = 2200.07
FLOW PROCESS FROM NODE 3138.00 TO NODE 3139.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 29.37
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.248
 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
                         1.40 0.20 1.00 84
 "PASTURE, DRYLAND" D
 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) = 2.58
 EFFECTIVE AREA(ACRES) = 1227.57 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1296.60
                         PEAK FLOW RATE(CFS) = 2202.65
*****************
 FLOW PROCESS FROM NODE 3139.00 TO NODE 3140.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 655.00 DOWNSTREAM(FEET) = 640.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 701.00 CHANNEL SLOPE = 0.0214
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2202.65
```

```
FLOW VELOCITY (FEET/SEC.) = 14.79 FLOW DEPTH (FEET) = 8.19 TRAVEL TIME (MIN.) = 0.79 Tc (MIN.) = 30.16
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3140.00 = 16688.00 FEET.
FLOW PROCESS FROM NODE 3139.00 TO NODE 3140.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC(MIN) = 30.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.214
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                SCS SOIL AREA
                                  Fρ
                                         An
                                                SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           26.00
                                    0.30
                                           1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            5 80
                                   0.30
                                           1.00
                                                 66
 NATURAL GOOD COVER
 "MEADOWS"
                            0.90
                                   0.30
                                           1 00
                                                 5.8
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                            1.00
                                   0.30
                                           1.00
 NATURAL FAIR COVER
 "WOODLAND"
                           2.80 0.30
                                         1.00
                                                 60
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                   C
                          1.80 0.25 1.00 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 38.30
                         SUBAREA RUNOFF(CFS) = 66.05
 EFFECTIVE AREA(ACRES) = 1265.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
                           PEAK FLOW RATE(CFS) = 2231.38
 TOTAL AREA(ACRES) = 1334.90
******************
FLOW PROCESS FROM NODE 3139.00 TO NODE 3140.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 30.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.214
 SUBAREA LOSS RATE DATA (AMC II):
                                Fp
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                         Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                            5 60
                                   0.25
                                           1.00
                                                 91
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           28.50
                                   0.25
                                           1.00
                                                 77
 NATURAL GOOD COVER
 "MEADOWS"
                            0.20
                                   0.25
                                           1.00
                                                 71
 NATURAL FAIR COVER
 "WOODLAND"
                           1.80
                                   0.25
                                           1.00
                                                 7.3
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           0.10 0.20
                                           1.00
                                                 81
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                   D
                          0.20 0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 36.40 SUBAREA RUNOFF(CFS) = 64.35
 EFFECTIVE AREA(ACRES) = 1302.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 1371.30 PEAK FLOW RATE(CFS) = 2295.73
*****
 FLOW PROCESS FROM NODE 3140.00 TO NODE 3141.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
```

```
______
 ELEVATION DATA: UPSTREAM(FEET) = 640.00 DOWNSTREAM(FEET) = 620.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 903.00 CHANNEL SLOPE = 0.0221
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2295.73
 FLOW VELOCITY (FEET/SEC.) = 15.15 FLOW DEPTH (FEET) = 8.29
 TRAVEL TIME (MIN.) = 0.99 Tc (MIN.) = 31.16
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3141.00 = 17591.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3140.00 TO NODE 3141.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 31.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.176
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
                         38.40
                                  0.30
                                         1.00 86
 NATURAL FAIR COVER
 "GRASS"
                   в 0.20
                                  0.30
                                        1.00 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   в 3.70 0.30
                                       1.00 66
 COMMERCIAL
                   в 0.60 0.30
                                       0.10 56
 NATURAL FAIR COVER
                       0.90
                                0.30
                                       1.00 60
 "WOODI.AND"
                   B
 AGRICULTURAL POOR COVER
 "FALLOW"
                   C
                        0.80 0.25 1.00 91
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 44.60 SUBAREA RUNOFF(CFS) = 75.48
 EFFECTIVE AREA(ACRES) = 1346.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp (INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1415.90 PEAK FLOW RATE(CFS) = 2326.95
*******************
 FLOW PROCESS FROM NODE 3140.00 TO NODE 3141.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 31.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.176
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                       Ap SCS
                                Fρ
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                    D
                          2.60
                                  0.20
                                         1.00 81
 AGRICULTURAL POOR COVER
 "FAT.LOW"
                         8.90
                                0.20
                                        1.00
 NATURAL POOR COVER
 "BARREN"
                    D
                         0.60
                                  0.20
                                        1.00 93
 NATURAL FAIR COVER
 "GRASS"
                   D
                         1.40
                                  0.20
                                       1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D 16.70
                                0.20
                                       1.00 83
                   D 0.70
                                0.20 0.10 75
 COMMERCIAL
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 30.90 SUBAREA RUNOFF(CFS) = 55.07
 EFFECTIVE AREA(ACRES) = 1377.77 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1446.80 PEAK FLOW RATE(CFS) = 2382.02
*******************
```

```
FLOW PROCESS FROM NODE 3141.00 TO NODE 3142.00 IS CODE = 51
-----
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 620.00 DOWNSTREAM(FEET) = 590.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1040.00 CHANNEL SLOPE = 0.0288
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2382.02
 FLOW VELOCITY (FEET/SEC.) = 16.86 FLOW DEPTH (FEET) = 7.89
 TRAVEL TIME (MIN.) = 1.03 Tc (MIN.) = 32.19
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3142.00 = 18631.00 FEET.
FLOW PROCESS FROM NODE 3141.00 TO NODE 3142.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 32.19
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.137
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                 Fp
                                       Ap SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                          28.30
                                  0.30
                                         1.00
 NATURAL FAIR COVER
 "GRASS"
                    В
                          0.70
                                  0.30
                                        1.00
                                               69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   В
                          4.60
                                  0.30
                                         1.00
                                               66
 NATURAL FAIR COVER
 "WOODLAND"
                    В
                         2.80
                                  0.30
                                         1.00
                                               60
 AGRICULTURAL POOR COVER
 "FALLOW"
                    C 24.70 0.25 1.00 91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" C 2.00 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) = 63.10 SUBAREA RUNOFF (CFS) = 105.52
 EFFECTIVE AREA(ACRES) = 1440.87 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1509.90 PEAK FLOW RATE(CFS) = 2439.11
******************
 FLOW PROCESS FROM NODE 3141.00 TO NODE 3142.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 32.19
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.137
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fo
                                       Ap SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          20.50
                                  0.25
                                         1.00 77
 NATURAL FAIR COVER
 "WOODLAND"
                    C
                          2.60 0.25
                                         1.00 73
 AGRICULTURAL POOR COVER
 "FALLOW"
                          1.80 0.20 1.00
                    D
                                               94
 NATURAL FAIR COVER
                         1.00 0.20 1.00 83
 "OPEN BRUSH"
                   D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 25.90 SUBAREA RUNOFF(CFS) = 44.11
 EFFECTIVE AREA(ACRES) = 1466.77 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1535.80 PEAK FLOW RATE(CFS) = 2483.22
```

```
************************
 FLOW PROCESS FROM NODE 3142.00 TO NODE 3143.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 590.00 DOWNSTREAM(FEET) = 560.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1232.00 CHANNEL SLOPE = 0.0244
 CHANNEL BASE (FEET) = 10.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2483.22
 FLOW VELOCITY (FEET/SEC.) = 16.01 FLOW DEPTH (FEET) = 8.42
 TRAVEL TIME (MIN.) = 1.28 Tc (MIN.) = 33.47
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3143.00 = 19863.00 FEET.
*****************
 FLOW PROCESS FROM NODE 3142.00 TO NODE 3143.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 33.47
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.088
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fρ
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                    В
                          20.00
                                   0.30
                                          1.00
                                                86
 NATURAL FAIR COVER
 "GRASS"
                          3.10
                                   0.30
                                          1.00
                    В
                                                69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    B 4.90
                                   0.30
                                          1.00
                                                66
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                          4.50
                                   0.30
                    B
                                         0.60 56
 NATURAL FAIR COVER
                          2.40 0.30
                                        1 00 60
 AGRICULTURAL POOR COVER
 "FAT.LOW"
                    C
                          5.80 0.25 1.00 91
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.29
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96
 SUBAREA AREA(ACRES) = 40.70 SUBAREA RUNOFF(CFS) = 66.25
 EFFECTIVE AREA(ACRES) = 1507.47 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1576.50
                           PEAK FLOW RATE (CFS) = 2485.13
FLOW PROCESS FROM NODE 3142.00 TO NODE 3143.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 33.47
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.088
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                          Aρ
                                               SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                                   0.25
                     С
                           2 60
                                          1.00
 "GRASS"
                                                79
 NATURAL FAIR COVER
                          11.40
 "OPEN BRUSH"
                     C
                                   0.25
                                          1 00
                                                77
 NATURAL FAIR COVER
                          0.50
                                   0.25
 "WOODT,AND"
                     C
                                          1.00
                                                7.3
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                     D
                           1.10
                                   0.20
                                          1.00
                                                81
 AGRICULTURAL POOR COVER
                           3.20
 "FALLOW"
                     D
                                   0.20
                                          1.00
                                                94
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           32.70
                     D
                                   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) = 51.50 SUBAREA RUNOFF(CFS) = 86.86
 EFFECTIVE AREA(ACRES) = 1558.97 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp (INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1628.00 PEAK FLOW RATE(CFS) = 2572.00
FLOW PROCESS FROM NODE 3143.00 TO NODE 3144.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 560.00 DOWNSTREAM(FEET) = 555.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 394.00 CHANNEL SLOPE = 0.0127
 CHANNEL BASE (FEET) = 15.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2572.00
 FLOW VELOCITY (FEET/SEC.) = 12.54 FLOW DEPTH (FEET) = 8.66
 TRAVEL TIME (MIN.) = 0.52 Tc (MIN.) = 33.99
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3144.00 = 20257.00 FEET.
*************************
 FLOW PROCESS FROM NODE 3143.00 TO NODE 3144.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 33.99
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.068
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
                                          Аp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           9.70
                                    0.30
                                           1.00
                                                 86
 NATURAL FAIR COVER
                           11.30
 "GRASS"
                                    0.30
                                           1 00
 URBAN FAIR COVER
 "THEF"
                           0.40
                                    0.30
                                           1.00
                                                  65
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     В 2.20
                                   0.30
                                           1.00
                                                  66
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                     В
                           8.40
                                  0.30
                                         0.60 56
 AGRICULTURAL POOR COVER
 "FALLOW"
                     C
                            1.20
                                   0.25 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.90
 SUBAREA AREA(ACRES) = 33.20 SUBAREA RUNOFF(CFS) = 53.80
 EFFECTIVE AREA(ACRES) = 1592.17 AREA-AVERAGED Fm(INCH/HR) = 0.26
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1661.20
                         PEAK FLOW RATE(CFS) = 2597.89
*******************
 FLOW PROCESS FROM NODE 3143.00 TO NODE 3144.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 33.99
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.068
 SUBAREA LOSS RATE DATA (AMC II):
                                  Fp
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                          Ap
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                            0.80
                                    0.25
                                           1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            6.00
                                    0.25
                                           1.00
                                                77
 AGRICULTURAL POOR COVER
 "FALLOW"
                            2.00
                                    0.20
                                           1.00
                                                 94
```

NATURAL FAIR COVER "GRASS"	D	1 30	0.20	1 00	84
NATURAL FAIR COVER	D	1.30	0.20	1.00	04
"OPEN BRUSH"			0.20		83
SUBAREA AVERAGE PERVIOU				. 22	
SUBAREA AVERAGE PERVIOU	S AREA FR	ACTION, Ap	= 1.00	06	7.7
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	16.10	SUBAREA	RUNOFF (CFS	(1) = 26.	- 0.25
AREA-AVERAGED Fp(INCH/H	P) = 0.2	/ AREA-A	VERAGED III	(INCH/HK)	- 0.23
TOTAL AREA (ACRES) = 1					624.65
				-	
******	*****	*****	*****	*****	*****
FLOW PROCESS FROM NODE	3144.00	TO NODE	3145.00 IS	CODE =	51
>>>>COMPUTE TRAPEZOIDA					
>>>>TRAVELTIME THRU SU					
ELEVATION DATA: UPSTREA					
CHANNEL LENGTH THRU SUB					
CHANNEL BASE (FEET) =				de obore	0.0230
MANNING'S FACTOR = 0.04				.00	
CHANNEL FLOW THRU SUBAR					
FLOW VELOCITY (FEET/SEC.				= 6.95	
TRAVEL TIME (MIN.) = 0					
LONGEST FLOWPATH FROM N	ODE 310	0.00 TO NO	DE 3145.0	00 = 20761	.00 FEET.
*****	*****	*****	*****	*****	*****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBARE					
MAINLINE TC (MIN) = 34.		a ()	0.50		
* 100 YEAR RAINFALL INT			2.050		
SUBAREA LOSS RATE DATA(					ļ
DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	
LAND USE NATURAL FAIR COVER	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
"CHAPARRAL, BROADLEAF"	В	0.40	0.30	1.00	63
AGRICULTURAL POOR COVER		0.10	0.00	1.00	
"FALLOW"		5.80	0.30	1.00	86
NATURAL FAIR COVER					
"GRASS"	В	3.50	0.30	1.00	69
URBAN FAIR COVER					
"TURF"	В	3.30	0.30	1.00	65
NATURAL FAIR COVER	P	4 00	0 30	1 00	66
"OPEN BRUSH" RESIDENTIAL	В	4.90	0.30	1.00	66
"3-4 DWELLINGS/ACRE"	В	5.40	0.30	0.60	56
SUBAREA AVERAGE PERVIOU					
SUBAREA AVERAGE PERVIOU					
SUBAREA AREA(ACRES) =	23.30	SUBAREA	RUNOFF (CFS		
EFFECTIVE AREA(ACRES) =					= 0.26
AREA-AVERAGED Fp(INCH/H	R) = 0.2	7 AREA-AVI	ERAGED Ap =	0.96	
TOTAL AREA(ACRES) = 1	700.60	PEAK F	LOW RATE (CI	rs) = 2	635.08
			****		*****
	*****				
**************************************					
FLOW PROCESS FROM NODE					
	3144.00	TO NODE	3145.00 IS		
FLOW PROCESS FROM NODE	3144.00 A TO MAIN	TO NODE	3145.00 IS	CODE =	81
FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC(MIN) = 34.	3144.00 	TO NODE	3145.00 IS	CODE =	81
FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 34.  * 100 YEAR RAINFALL INT	3144.00 A TO MAIN: 	TO NODE LINE PEAK	3145.00 IS	CODE =	81
FLOW PROCESS FROM NODE  >>>> ADDITION OF SUBARE  MAINLINE TC (MIN) = 34.  * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA(	3144.00 	TO NODE LINE PEAK !	3145.00 IS 	S CODE =	81
FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 34.  * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/	3144.00  A TO MAIN:  48  ENSITY(IN:  AMC II):  SCS SOIL	TO NODE LINE PEAK  CH/HR) = 2	3145.00 IS FLOW<<<< 2.050	S CODE =	81  scs
FLOW PROCESS FROM NODE	3144.00  A TO MAIN:  48  ENSITY(IN:  AMC II):  SCS SOIL	TO NODE LINE PEAK  CH/HR) = 2	3145.00 IS 	S CODE =	81  scs
FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 34.  * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/	3144.00  A TO MAIN:  48  ENSITY(IN:  AMC II):  SCS SOIL	TO NODE LINE PEAK  CH/HR) = 2	3145.00 IS FLOW<<<< 2.050	Ap (DECIMAL)	81  scs

AGRICULTURAL POOR COVER "FALLOW"		1.30	0.25	1.00	91
NATURAL FAIR COVER					
"GRASS" NATURAL FAIR COVER	С	0.40	0.25	1.00	79
"OPEN BRUSH"	С	7.40	0.25	1.00	77
NATURAL FAIR COVER					
"CHAPARRAL, BROADLEAF"		2.70	0.20	1.00	81
AGRICULTURAL POOR COVER "FALLOW"		2 90	0.20	1 00	9.1
SUBAREA AVERAGE PERVIOUS					24
SUBAREA AVERAGE PERVIOUS	AREA FR	ACTION, Ap	= 1.00		
SUBAREA AREA(ACRES) =	16.50	SUBAREA	RUNOFF (CFS	(3) = 26.9	90
EFFECTIVE AREA(ACRES) = AREA-AVERAGED Fp(INCH/HR	1648.0	/ AREA-A	VERAGED FM ERAGED An =	(INCH/HK) : = 0 96	= 0.26
TOTAL AREA (ACRES) = 17	17.10	PEAK F	LOW RATE (CI	FS) = 2	661.98
***********************					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
MAINLINE Tc(MIN) = 34.4					
* 100 YEAR RAINFALL INTE		CH/HR) =	2.050		
SUBAREA LOSS RATE DATA(A	MC II):				
DEVELOPMENT TYPE/ LAND USE	SCS SOIL	AREA	Fp	Ap	SCS
LAND USE NATURAL FAIR COVER	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
"GRASS"	D	2.40	0.20	1.00	84
NATURAL FAIR COVER					
	D	44.40	0.20	1.00	83
RESIDENTIAL "3-4 DWELLINGS/ACRE"	D	0.60	0.20	0.60	75
NATURAL FAIR COVER	D	0.00	0.20	0.00	75
"WOODLAND"	D	0.70	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS	LOSS RA	TE, Fp(INC	H/HR) = 0	.20	
SUBAREA AVERAGE PERVIOUS					
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =					
AREA-AVERAGED Fp(INCH/HR					- 0.23
TOTAL AREA(ACRES) = 17					742.10
*******					
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDAL					
>>>>TRAVELTIME THRU SUB					
ELEVATION DATA: UPSTREAM					
CHANNEL LENGTH THRU SUBA	REA (FEET	) = 1156.	00 CHANNE		
CHANNEL BASE (FEET) = 1					
MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE				.00	
FLOW VELOCITY (FEET/SEC.)				= 6.83	
TRAVEL TIME (MIN.) = 1. LONGEST FLOWPATH FROM NO	DE 310	0.00 TO NO	DE 3146.0	00 = 21917	.00 FEET.
******	*****	******	******	******	*****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
MAINLINE Tc(MIN) = 35.5					
* 100 YEAR RAINFALL INTE	NSITY(IN	CH/HR) =	2.014		
SUBAREA LOSS RATE DATA(A					000
DEVELOPMENT TYPE/ LAND USE	SCS SOIL GROUP		Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
TUND ODE	GIVOUE	(ひじいじり)	( TIACII / III/ )	(DUCTINAI)	○TA

AGRICULTURAL POOR COVER "FALLOW"		2.20	0.30	1.00	86	
NATURAL FAIR COVER						
"GRASS" URBAN FAIR COVER	В	6.90	0.30	1.00	69	
"TURF"	В	6.60	0.30	1.00	65	
NATURAL FAIR COVER "OPEN BRUSH"	D	0.70	0.30	1 00	66	
RESIDENTIAL						
"3-4 DWELLINGS/ACRE"		11.70	0.30	0.60	56	
AGRICULTURAL POOR COVER "FALLOW"		4.70	0.25	1.00	91	
SUBAREA AVERAGE PERVIOUS	LOSS RA	TE, Fp(INC	H/HR) = 0.1			
SUBAREA AVERAGE PERVIOUS SUBAREA AREA(ACRES) =				) = 52	18	
EFFECTIVE AREA(ACRES) =	1728.9	7 AREA-A	VERAGED Fm(	INCH/HR) :	= 0.25	
AREA-AVERAGED Fp(INCH/HR TOTAL AREA(ACRES) = 17					742 10	
NOTE: PEAK FLOW RATE DEF				5) – 2	742.10	
********	******	*******	******	******	*****	
FLOW PROCESS FROM NODE						
>>>>ADDITION OF SUBAREA						
======================================						
MAINLINE TC (MIN) = 35.5		CII /IID) —	0.14			
* 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(A			2.014			
DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	SCS	
LAND USE NATURAL FAIR COVER	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
"CHAPARRAL, BROADLEAF"	С		0.25			
NATURAL FAIR COVER "GRASS"	C	2 30	0.25	1 00	7.9	
URBAN FAIR COVER	C	2.50	0.23	1.00	7.5	
"TURF"	C	0.20	0.25	1.00	77	
NATURAL FAIR COVER "OPEN BRUSH"	C	12 00	0.25	1 00	77	
RESIDENTIAL	C	12.90	0.23	1.00	, ,	
"3-4 DWELLINGS/ACRE"		8.00	0.25	0.60	69	
AGRICULTURAL POOR COVER "FALLOW"		4.40	0.20	1.00	94	
SUBAREA AVERAGE PERVIOUS	LOSS RA	TE, Fp(INC	H/HR) = 0.1			
SUBAREA AVERAGE PERVIOUS SUBAREA AREA(ACRES) =				) = 50	62	
EFFECTIVE AREA(ACRES) =						
AREA-AVERAGED Fp(INCH/HR TOTAL AREA(ACRES) = 18					700 51	
IOIAL AREA (ACRES) - 10	29.30	FEAR F	LOW RAIL (CF.	5) – 2	790.31	
******						
FLOW PROCESS FROM NODE						
>>>>ADDITION OF SUBAREA						
MAINLINE Tc (MIN) = 35.5		=======		======		
* 100 YEAR RAINFALL INTE	NSITY(IN		2.014			
SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/	MC II): SCS SOIL		Fp	Δn	SCS	
LAND USE			(INCH/HR)	Ap (DECIMAL)		
NATURAL FAIR COVER	D	0.00	0.00	1 00	0.4	
"GRASS" URBAN FAIR COVER	D	8.80	0.20	1.00	84	
"TURF"	D	2.10	0.20	1.00	82	
NATURAL FAIR COVER "OPEN BRUSH"	D	4.30	0.20	1.00	83	
RESIDENTIAL	D	1.50	0.20	1.00		
"3-4 DWELLINGS/ACRE"	D	6.00	0.20	0.60	75	

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SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA(ACRES) = 21.20 SUBAREA RUNOFF(CFS) = 35.05
 EFFECTIVE AREA(ACRES) = 1781.47 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.96
 TOTAL AREA (ACRES) = 1850.50 PEAK FLOW RATE (CFS) = 2825.56
******************
 FLOW PROCESS FROM NODE 3146.00 TO NODE 3147.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 500.00 DOWNSTREAM(FEET) = 484.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 399.00 CHANNEL SLOPE = 0.0401
 CHANNEL BASE (FEET) = 15.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2825.56
 FLOW VELOCITY (FEET/SEC.) = 19.57 FLOW DEPTH (FEET) = 6.67
 TRAVEL TIME (MIN.) = 0.34 Tc (MIN.) = 35.87
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3147.00 = 22316.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3146.00 TO NODE 3147.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 35.87
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.004
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                          Аp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                           0.90
                                   0.30
                                           1.00
                                                 86
 NATURAL FAIR COVER
 "GRASS"
                     В
                          11.10 0.30
                                          1.00
                                                 69
 URBAN FAIR COVER
 "TURF"
                          2.00 0.30
                                          1.00
                                                 65
 NATURAL FAIR COVER
                   в 3.10 0.30
 "OPEN BRUSH"
                                         1.00
                                                 66
 RESIDENTIAL
                   В
 "3-4 DWELLINGS/ACRE"
                          3.80
                                 0.30
                                         0.60 56
 NATURAL FAIR COVER
 "WOODLAND"
                     В
                           0.70
                                 0.30 1.00 60
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.93
 SUBAREA AREA(ACRES) = 21.60 SUBAREA RUNOFF(CFS) = 33.54
 EFFECTIVE AREA(ACRES) = 1803.07 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 1872.10
                           PEAK FLOW RATE(CFS) = 2842.75
*******************
 FLOW PROCESS FROM NODE 3146.00 TO NODE 3147.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 35.87
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.004
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                            0.70
                                   0.25
                                           1.00 91
 NATURAL FAIR COVER
                                           1.00 79
 "GRASS"
                            5.80
                                   0.25
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                                           1.00 77
                            0.40
                                   0.25
```

RESIDENTIAL "3-4 DWELLINGS/ACRE"	С	3.90	0.25	0.60	69
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	D	10.50	0.20	1.00	81
AGRICULTURAL POOR COVER			0.20		
SUBAREA AVERAGE PERVIOU	S LOSS RA	TE, Fp(IN	CH/HR) = 0		94
SUBAREA AVERAGE PERVIOU SUBAREA AREA(ACRES) =	S AREA FR	ACTION, A	p = 0.94 A RUNOFF(CF:	s) = 39	81
EFFECTIVE AREA(ACRES) =	1827.6	7 AREA-	AVERAGED Fm	(INCH/HR)	= 0.25
AREA-AVERAGED Fp(INCH/H TOTAL AREA(ACRES) = 1					882.55
******					
FLOW PROCESS FROM NODE	3146.00	TO NODE	3147.00 I	S CODE =	81
>>>>ADDITION OF SUBARE	A TO MAIN	LINE PEAK	FLOW<		
MAINLINE Tc(MIN) = 35.	87				
* 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA(			2.004		
DEVELOPMENT TYPE/ LAND USE	SCS SOIL	AREA	Fp	Ap	SCS
LAND USE NATURAL FAIR COVER	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
"GRASS"	D	6.60	0.20	1.00	84
URBAN FAIR COVER "TURF"	D	0.30	0.20	1 00	82
NATURAL FAIR COVER					
"OPEN BRUSH" NATURAL FAIR COVER	D	42.40	0.20	1.00	83
"WOODLAND"			0.20		79
SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU				.20	
SUBAREA AREA(ACRES) =	53.50	SUBARE	A RUNOFF (CF	s) = 86.	86
EFFECTIVE AREA(ACRES) = AREA-AVERAGED Fp(INCH/H	1881.1 R) = 0.2	7 AREA-A	AVERAGED Fm	(INCH/HR) = 0.96	= 0.25
TOTAL AREA(ACRES) = 1					969.42
**************************************	3147.00	TO NODE	3148.00 I	S CODE =	51
>>>>COMPUTE TRAPEZOIDA					
>>>>TRAVELTIME THRU SU					
ELEVATION DATA: UPSTREA	M(FEET) =	484.00	O DOWNSTRE	AM(FEET) =	460.00
CHANNEL LENGTH THRU SUB CHANNEL BASE (FEET) =				EL SLOPE =	0.0227
MANNING'S FACTOR = 0.04				.00	
CHANNEL FLOW THRU SUBAR FLOW VELOCITY (FEET/SEC.				= 8 01	
TRAVEL TIME (MIN.) = 1	.09 Tc(	MIN.) = 3	36.96		
LONGEST FLOWPATH FROM N	ODE 310	0.00 TO NO	ODE 3148.	00 = 23374	.00 FEET.
*******					
FLOW PROCESS FROM NODE	3147.00	TO NODE	3148.00 I	S CODE =	81
>>>>ADDITION OF SUBARE					
MAINLINE Tc(MIN) = 36.					=======
* 100 YEAR RAINFALL INT	ENSITY(IN		1.971		
SUBAREA LOSS RATE DATA( DEVELOPMENT TYPE/	AMC II): SCS SOIL		Fp	Ap	SCS
LAND USE	GROUP	(ACRES)		(DECIMAL)	
NATURAL FAIR COVER "GRASS"	В	3.40	0.30	1.00	69
URBAN FAIR COVER	D	1 70	0.20	1 00	65
"TUKF"	В	1.70	0.30	1.00	65

NATURAL FAIR COVER "GRASS"	С	3.30	0.25	1.00	79	
RESIDENTIAL						
"3-4 DWELLINGS/ACRE" NATURAL FAIR COVER	С	3.10	0.25	0.60	69	
"GRASS"			0.20		84	
SUBAREA AVERAGE PERVIOU				.25		
SUBAREA AVERAGE PERVIOU SUBAREA AREA(ACRES) =	5 AREA FR 15.70	ACTION, AP SUBAREA	A RUNOFF(CF)	s) = 24.	56	
EFFECTIVE AREA(ACRES) =	1896.8	7 AREA-A	AVERAGED Fm	(INCH/HR) :	= 0.25	
AREA-AVERAGED Fp(INCH/H TOTAL AREA(ACRES) = 1					0.00 40	
NOTE: PEAK FLOW RATE DE				25) – 2	909.42	
**************************************						
>>>>COMPUTE TRAPEZOIDA >>>>TRAVELTIME THRU SU	BAREA (EX	ISTING ELE	EMENT) <<<<			
ELEVATION DATA: UPSTREA						
CHANNEL LENGTH THRU SUB CHANNEL BASE (FEET) =	AREA (FEET	) = 1137.	00 CHANN			
MANNING'S FACTOR = 0.04				.00		
CHANNEL FLOW THRU SUBAR				0.55		
FLOW VELOCITY (FEET/SEC. TRAVEL TIME (MIN.) = 1	) = 14.6 29 Tc(	9 FLOW I	)EPTH(FEET) 88 25	= 8.5/		
LONGEST FLOWPATH FROM N	ODE 310	0.00 TO NO	DDE 3149.	00 = 24511	.00 FEET.	
******	*****	*****	*****	*****	****	
FLOW PROCESS FROM NODE						
>>>>ADDITION OF SUBARE						
MAINLINE Tc(MIN) = 38.						
* 100 YEAR RAINFALL INT			1.932			
SUBAREA LOSS RATE DATA(. DEVELOPMENT TYPE/			Fp	Ар	SCS	
			(INCH/HR)			
AGRICULTURAL POOR COVER						
"FALLOW" NATURAL FAIR COVER	В	0.20	0.30	1.00	86	
"GRASS"	В	34.10	0.30	1.00	69	
URBAN FAIR COVER	D	C 20	0.30	1 00	CE	
"TURF" NATURAL FAIR COVER	В	6.20	0.30	1.00	65	
"OPEN BRUSH"	В	1.10	0.30	1.00	66	
NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"	B	0.40	0.30	1 00	72	
NATURAL FAIR COVER						
"GRASS"			0.25		79	
SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU				.29		
SUBAREA AREA(ACRES) =	51.60	SUBARE	A RUNOFF (CF	s) = 76.	24	
EFFECTIVE AREA(ACRES) =	1948.4	7 AREA-A	AVERAGED Fm	(INCH/HR) :	= 0.25	
AREA-AVERAGED Fp(INCH/H TOTAL AREA(ACRES) = 2	017.50	PEAK I	FLOW RATE (C	= 0.96 FS) = 2	969.42	
NOTE: PEAK FLOW RATE DE				, –		
*****	*****	*****	****	****	****	
FLOW PROCESS FROM NODE	3148.00	TO NODE	3149.00 I	S CODE =	81	
>>>>ADDITION OF SUBARE	A TO MAIN	LINE PEAK	FLOW<			
MAINLINE TC(MIN) = 38.						
MAINLINE TC(MIN) = 38. * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA(.	25 ENSITY(IN	CH/HR) =				

	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN
URBAN FAIR COVER "TURF"			0.25	1.00	77
NATURAL FAIR COVER "OPEN BRUSH"	С	0.10	0.25	1.00	77
AGRICULTURAL POOR COVER "FALLOW"		1.80	0.20	1.00	94
NATURAL FAIR COVER "GRASS"			0.20		
NATURAL FAIR COVER "OPEN BRUSH"			0.20		83
NATURAL FAIR COVER "CHAPARRAL, NARROWLEAF"					
"CHAPARRAL, NARROWLEAF" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS	S LOSS RAT	TE, Fp(IN	CH/HR) = 0		86
SUBAREA AREA(ACRES) =	89.60	SUBARE	A RUNOFF (CF	S) = 139.	65
EFFECTIVE AREA(ACRES) = AREA-AVERAGED Fp(INCH/HI TOTAL AREA(ACRES) = 2:	R) = 0.26	6 AREA-A	VERAGED Ap	= 0.96	
*******	*****	*****	****	*****	*****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
MAINLINE TC (MIN) = 38 * 100 YEAR RAINFALL INTI SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/	25 ENSITY(INC AMC II): SCS SOIL	CH/HR) =	1.932	Ар	SCS
NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HI TOTAL AREA (ACRES) = 2:	D S LOSS RAT S AREA FRA 1.10 2039.17 R) = 0.26	1.10 FE, Fp(INGACTION, A) SUBARE AREA-A	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF: AVERAGED FM	1.00 .20 S) = 1.' (INCH/HR) =	79 72 = 0.25
**************************************	3149.00	TO NODE	3150.00 I		
>>>>COMPUTE TRAPEZOIDA:	L CHANNEL BAREA (EXI	FLOW<<<<	< EMENT) <<<<		
ELEVATION DATA: UPSTREAL CHANNEL LENGTH THRU SUB: CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04 CHANNEL FLOW THRU SUBARI FLOW VELOCITY (FEET/SEC. TRAVEL TIME (MIN.) = 0 LONGEST FLOWPATH FROM NO	M(FEET) = AREA(FEET) 15.00 "2 0 MAXIMU EA(CFS) = ) = 18.99 .51 Tc(N	440.0 = 579 Z" FACTOR JM DEPTH( 3089.9 FLOW MIN.) =	0 DOWNSTRE. .00 CHANN: = 1.000 FEET) = 10 9 DEPTH (FEET) 38.76	AM(FEET) = EL SLOPE = .00 = 7.30	420.00 0.0345
**************************************					
>>>>ADDITION OF SUBAREA			FLOW<		
MAINLINE TC (MIN) = 38. * 100 YEAR RAINFALL INTI SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE	76 ENSITY(INC AMC II): SCS SOIL	CH/HR) =	1.917  Fp (INCH/HR)		SCS
AGRICULTURAL POOR COVER		,	,	,	
"FALLOW"	В	0.90	0.30	1.00	86

NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	В	1 40	0.30	1.00	63
NATURAL FAIR COVER					
"GRASS" URBAN FAIR COVER	В	18.50	0.30	1.00	69
"TURF" NATURAL FAIR COVER	В	4.10	0.30	1.00	65
"OPEN BRUSH"	В	0.20	0.30	1.00	66
RESIDENTIAL "3-4 DWELLINGS/ACRE"	B	0.40	0.30	0.60	5.6
SUBAREA AVERAGE PERVIOUS					30
SUBAREA AVERAGE PERVIOUS SUBAREA AREA(ACRES) = 2				:) = 37	1.6
EFFECTIVE AREA(ACRES) =	2064.67	AREA-A	AVERAGED Fm (	INCH/HR)	
AREA-AVERAGED Fp (INCH/HR) TOTAL AREA(ACRES) = 213					099.17
**************************************					
>>>>ADDITION OF SUBAREA					
MAINLINE TC (MIN) = 38.76		I /IID) —	1 017		
* 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA(AN	MC II):				
DEVELOPMENT TYPE/	SCS SOIL	AREA	Fp	Ap	SCS
LAND USE NATURAL FAIR COVER	GROUP (	(ACKES)	(INCH/HR)	(DECIMAL)	CN
"WOODLAND" AGRICULTURAL POOR COVER		0.90	0.30	1.00	60
"FALLOW"		0.70	0.25	1.00	91
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	C	24 00	0.25	1 00	75
NATURAL FAIR COVER					
"GRASS" URBAN FAIR COVER	С	21.70	0.25	1.00	79
"TURF"	С	0.90	0.25	1.00	77
NATURAL FAIR COVER "OPEN BRUSH"	С	81 80	0.25	1 00	77
SUBAREA AVERAGE PERVIOUS					, ,
SUBAREA AVERAGE PERVIOUS		_			
SUBAREA AREA(ACRES) = 13 EFFECTIVE AREA(ACRES) =					
AREA-AVERAGED Fp(INCH/HR)	= 0.26	AREA-AV	/ERAGED Ap =	0.96	
TOTAL AREA(ACRES) = 226	54.60	PEAK I	FLOW RATE (CF	'S) = 3:	295.55
*****					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA					
MAINLINE Tc (MIN) = 38.76					=======
* 100 YEAR RAINFALL INTEN		H/HR) =	1.917		
SUBAREA LOSS RATE DATA(AN DEVELOPMENT TYPE/		AREA	Fp	Дp	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
RESIDENTIAL "3-4 DWELLINGS/ACRE"	С	2.30	0.25	0.60	69
NATURAL FAIR COVER					
"WOODLAND" NATURAL FAIR COVER	С	5.10	0.25	1.00	73
"CHAPARRAL, BROADLEAF"	D	6.20	0.20	1.00	81
NATURAL FAIR COVER "GRASS"	D	6.00	0.20	1.00	84
NATURAL FAIR COVER					
"OPEN BRUSH" SUBAREA AVERAGE PERVIOUS	D LOSS RATE		0.20 CH/HR) = 0.		83
		, 1. (-11)	, ,		

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SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.96
 SUBAREA AREA(ACRES) = 24.90 SUBAREĀ RUNOFF(CFS) = 38.36
 EFFECTIVE AREA(ACRES) = 2220.47 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 2289.50
                            PEAK FLOW RATE(CFS) =
                                                3333.91
******************
 FLOW PROCESS FROM NODE 3150.00 TO NODE 3151.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 420.00 DOWNSTREAM(FEET) = 400.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1410.00 CHANNEL SLOPE = 0.0142
 CHANNEL BASE (FEET) = 15.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3333.91
 FLOW VELOCITY (FEET/SEC.) = 14.00 FLOW DEPTH (FEET) = 9.66
 TRAVEL TIME (MIN.) = 1.68 Tc (MIN.) = 40.44
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3151.00 = 26500.00 FEET.
*******************
 FLOW PROCESS FROM NODE 3150.00 TO NODE 3151.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
_____
 MAINLINE Tc (MIN) = 40.44
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.870
 SUBAREA LOSS RATE DATA(AMC II):
                                  Fp
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                                  SCS
                                            Αp
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
                                     0.30
 "FALLOW"
                            0.60
                                            1.00
                                                   86
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                            0.20
                                     0.30
                                            1.00
                                                   63
 NATURAL FAIR COVER
 "GRASS"
                           17.10
                                     0.30
                                            1.00
                                                   69
                      В
 URBAN FAIR COVER
 "TURF"
                            5.10
                                     0.30
                                            1 00 65
 AGRICULTURAL POOR COVER
                             4.20
                                     0.25
 "FAT.T.OW"
                                            1.00
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                     С
                            5.90
                                    0.25
                                            1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.28
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 33.10
                           SUBAREA RUNOFF(CFS) = 47.22
 EFFECTIVE AREA(ACRES) = 2253.57 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 2322.60
                            PEAK FLOW RATE(CFS) = 3333.91
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
 FLOW PROCESS FROM NODE 3150.00 TO NODE 3151.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 40.44
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.870
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                   Fp
                                            Ap
                                                  SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                      C
                           13.10
                                     0.25
                                            1.00 79
 URBAN FAIR COVER
                                            1.00 77
 "TURF"
                      С
                            1.00
                                     0.25
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      С
                            36.30
                                     0.25
                                             1.00
                                                   77
```

NATURAL FAIR COVER "WOODLAND"	C	5 40	0.25	1 00	73
NATURAL FAIR COVER	C	J.40	0.23	1.00	73
"GRASS"	D	1.30	0.20	1.00	84
NATURAL FAIR COVER	_	2 22	0.00	1 00	0.0
"OPEN BRUSH" SUBAREA AVERAGE PERVIOU			0.20		83
SUBAREA AVERAGE PERVIOU	S AREA FRA	CTION, Ar	0 = 1.00		
SUBAREA AREA(ACRES) =	60.40	SUBAREA	A RUNOFF (CF:	3) = 88.	27
EFFECTIVE AREA(ACRES) =	2313.97	AREA-A	AVERAGED Fm	(INCH/HR)	= 0.25
AREA-AVERAGED Fp(INCH/H TOTAL AREA(ACRES) = 2					374 90
TOTAL AREA (ACRES) = 2	.303.00	FEAR I	LOW RATE (C	23) – 3	374.90
*****					
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDA					
>>>>TRAVELTIME THRU SU					
ELEVATION DATA: UPSTREA CHANNEL LENGTH THRU SUE					
CHANNEL BASE (FEET) =				EL SLOPE -	0.0103
MANNING'S FACTOR = 0.04				.00	
CHANNEL FLOW THRU SUBAR					
FLOW VELOCITY (FEET/SEC.	) = 12.39	FLOW I	DEPTH (FEET)	= 9.30	
TRAVEL TIME (MIN.) = 0 LONGEST FLOWPATH FROM N	1.26 TC (M	IN.) = 4	10.69 NDE 3152 (	10 = 26691	00 FEET
BONGEST FEOWERIN FROM N	IODE SIOO	.00 10 10	JDE 3132.	00 - 20001	.00 1551.
******					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBARE					
MAINLINE TC (MIN) = $40$ .					
* 100 YEAR RAINFALL INT			1.864		
SUBAREA LOSS RATE DATA( DEVELOPMENT TYPE/	SCS SOIL	AREA	Fn	An	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	
NATURAL FAIR COVER					
"GRASS"	В	14.60	0.30	1.00	69
URBAN FAIR COVER	B	0.80	0.30	1 00	65
NATURAL FAIR COVER	ь	0.00	0.30	1.00	03
"CHAPARRAL, BROADLEAF"	В	2.40	0.30	1.00	63
NATURAL FAIR COVER	2	2.10	0.00	1.00	
"GRASS"		16.80	0.25	1.00	79
AGRICULTURAL GOOD COVER		0 00	0.05	1 00	0.1
"SMALL GRAIN, CONTOURED" NATURAL FAIR COVER	C	0.20	0.25	1.00	9.1
"OPEN BRUSH"	С	0.70	0.25	1.00	77
SUBAREA AVERAGE PERVIOU				.28	
SUBAREA AVERAGE PERVIOU	IS AREA FRA	CTION, Ap	= 1.00		
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =					
AREA-AVERAGED Fp(INCH/H					- 0.23
TOTAL AREA(ACRES) = 2					413.36
******					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBARE				=======	=======
MAINLINE TC (MIN) = 40.					
* 100 YEAR RAINFALL INT		H/HR) =	1.864		
SUBAREA LOSS RATE DATA(	AMC II): SCS SOIL	ת יום ת	Fn	7\∽	909
DEVELOPMENT TYPE/ LAND USE	GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN

```
NATURAL FAIR COVER
  "CHAPARRAL, BROADLEAF"
                   C
                          15.80
                                   0.25 1.00 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 15.80
                         SUBAREA RUNOFF(CFS) = 22.95
 EFFECTIVE AREA(ACRES) = 2365.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 2434.30
                           PEAK FLOW RATE (CFS) = 3436.31
*******************
 FLOW PROCESS FROM NODE 3152.00 TO NODE 3153.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
ELEVATION DATA: UPSTREAM(FEET) = 398.00 DOWNSTREAM(FEET) = 396.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 231.00 CHANNEL SLOPE = 0.0087
 CHANNEL BASE (FEET) = 20.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3436.31
 FLOW VELOCITY (FEET/SEC.) = 11.62 FLOW DEPTH (FEET) = 9.89
 TRAVEL TIME (MIN.) = 0.33 Tc (MIN.) = 41.02
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3153.00 = 26922.00 FEET.
************************
 FLOW PROCESS FROM NODE 3152.00 TO NODE 3153.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 41.02
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.856
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                  Fp
                                           Αp
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
                            2.60
                                   0.30
                                           1.00
                                                 86
 "FALLOW"
                     В
 URBAN FAIR COVER
 "TURF"
                           1.40
                                   0.30
                                          1.00
                                                65
                     B
 AGRICULTURAL POOR COVER
 "FALLOW"
                           44.50
                                   0.25
                                          1.00
                                                 91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           3.30
                                   0.25
                                          1.00
                                                 75
 NATURAL FAIR COVER
                                          1.00 79
 "GRASS"
                     C
                            8.30
                                   0.25
 URBAN FAIR COVER
 "TURF"
                     С
                            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) = 60.20 SUBAREA RUNOFF(CFS) = 86.86
 EFFECTIVE AREA(ACRES) = 2425.47 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 2494.50
                           PEAK FLOW RATE(CFS) =
*************************
 FLOW PROCESS FROM NODE 3152.00 TO NODE 3153.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 41.02
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.856
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fρ
                                          Ap
                                                SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                           11.30
                                   0.25
                                           1.00 77
 NATURAL FAIR COVER
 "WOODLAND"
                     С
                            0.40
                                   0.25
                                           1.00
                                                 73
```

AGRICULTURAL POOR COVER "FALLOW"		5.70	0.20	1.00	94	
NATURAL FAIR COVER	-	0.70	0.20	1.00	3.1	
"GRASS"	D	2.70	0.20	1.00	84	
NATURAL FAIR COVER	_					
"OPEN BRUSH"	D	1.30	0.20	1.00	83	
NATURAL FAIR COVER "WOODLAND"	D	0.40	0.20	1.00	79	
SUBAREA AVERAGE PERVIOUS					, ,	
SUBAREA AVERAGE PERVIOUS	AREA FR	ACTION, Ap	= 1.00			
SUBAREA AREA(ACRES) =	21.80	SUBAREA	RUNOFF (CF	S) = 31.	97	
EFFECTIVE AREA (ACRES) =					= 0.25	
AREA-AVERAGED Fp(INCH/HF TOTAL AREA(ACRES) = 25					538.92	
				,		
******						* *
FLOW PROCESS FROM NODE						
>>>>COMPUTE TRAPEZOIDAI						
>>>>TRAVELTIME THRU SUE						
ELEVATION DATA: UPSTREAM						
CHANNEL LENGTH THRU SUBJ				EL SLOPE =	0.0123	
CHANNEL BASE (FEET) = 2 MANNING'S FACTOR = 0.040				0.0		
CHANNEL FLOW THRU SUBARE				.00		
FLOW VELOCITY (FEET/SEC.)				= 9.13		
TRAVEL TIME $(MIN.) = 1$ .	.12 Tc(	MIN.) = 4	12.14			
LONGEST FLOWPATH FROM NO	DDE 310	0.00 TO NO	DDE 3154.	00 = 27816	.00 FEET.	
*****	******	*******	*****	******	*******	**
FLOW PROCESS FROM NODE						
>>>>ADDITION OF SUBAREA	TO MATN	TINE PEAK	FT.OW<<<<			
						==
MAINLINE Tc (MIN) = 42.1	 . 4					==
MAINLINE TC (MIN) = 42.1 * 100 YEAR RAINFALL INTE	ENSITY(IN	CH/HR) =	1.831			==
MAINLINE TC (MIN) = 42.1 * 100 YEAR RAINFALL INTE	ENSITY(IN	CH/HR) =	1.831		SCS	==
MAINLINE TC(MIN) = 42.1 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(F DEVELOPMENT TYPE/ LAND USE	ENSITY(IN AMC II): SCS SOIL GROUP	CH/HR) =	1.831		SCS	==
MAINLINE TC (MIN) = 42.1 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER	AMC II): SCS SOIL GROUP	CH/HR) =  AREA (ACRES)	1.831 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	==
MAINLINE TC (MIN) = 42.1 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW"	AMC II): SCS SOIL GROUP	CH/HR) =  AREA (ACRES)	1.831	Ap (DECIMAL)	SCS CN	==
MAINLINE TC (MIN) = 42.1 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER	ENSITY(IN AMC II): SCS SOIL GROUP	CH/HR) =  AREA (ACRES)  0.20	1.831 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN 86	==
MAINLINE TC(MIN) = 42.1 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(? DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER	ENSITY(IN AMC II): SCS SOIL GROUP	CH/HR) =  AREA (ACRES)  0.20	1.831 Fp (INCH/HR) 0.30	Ap (DECIMAL)	SCS CN 86	==
MAINLINE TC(MIN) = 42.1 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA(I DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS"	ENSITY(IN AMC II): SCS SOIL GROUP	CH/HR) =  AREA (ACRES)  0.20	1.831 Fp (INCH/HR) 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 86 69	==
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER	ACMSITY(IN AMC II): SCS SOIL GROUP B B	CH/HR) = AREA (ACRES) 0.20 11.10 7.50	1.831 Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 86 69	==
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	ACCOUNTY (IN AMC II): SCS SOIL GROUP  B B B B	CH/HR) = AREA (ACRES) 0.20 11.10 7.50	1.831 Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00	SCS CN 86 69	==
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER	4 A SUNSITY(IN MMC II): SCS SOIL GROUP B B B B	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20	1.831 Fp (INCH/HR) 0.30 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00 1.00	SCS CN 86 69 65	==
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER	4 A SUNSITY(IN MMC II): SCS SOIL GROUP B B B B	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20	1.831 Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00 1.00	SCS CN 86 69 65	==
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER	4 A SUNSITY(IN MMC II): SCS SOIL GROUP B B B B	CH/HR) = AREA (ACRES) 0.20 11.10 7.50 0.20 0.10	1.831 Fp (INCH/HR) 0.30 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00	SCS CN 86 69 65	==
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER	A LA CINSITY (IN AMC II): SCS SOIL GROUP  B B B C C	CH/HR) = AREA (ACRES) 0.20 11.10 7.50 0.20 0.10 0.20	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 69 65 63 91	==
MAINLINE TC (MIN) = 42.1 * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS	A A S S S S S S S S S S S S S S S S S S	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, FP(INGACTION, AR	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0 0 = 1.00	Ap (DECIMAL) 1.00 1.00 1.00 1.00 1.00	SCS CN 86 69 65 63 91	==
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) =	A ENSITY (IN AMC II): SCS SOIL GROUP  B B B C C C S LOSS RA S AREA FR	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, FP(INC ACTION, AF SUBAREF	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0  0 = 1.00  A RUNOFF (CF	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  30  1.00  30	SCS CN 86 69 65 63 91 79	==
MAINTINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) =	A A B B B B C C C S LOSS RA S AREA FR 19.30 2466.5	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, Fp(INC ACTION, AF SUBAREA-7  AREA-7	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0  0 = 1.00  A RUNOFF (CFF	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 69 65 63 91 79	==
MAINTINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HE	A A B B B B B C C C S LOSS RA S AREA FR 19.30 2466.5 R) = 0.2	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, Fp(INC ACTION, AF SUBAREA-7 AREA-4 6 AREA-A\	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0 0 = 1.00 A RUNOFF (CFF AVERAGED FM VERAGED AP	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 69 65 63 91 79	==
MAINTINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) =	### A PROPERTY OF THE PROPERTY	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, Fp(INC ACTION, AK SUBAREI 7 AREA-AT PEAK I	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.25  CH/HR) = 0  a RUNOFF (CF-VERAGED FM VERAGED FM VERAGED AP  FLOW RATE (CI	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 69 65 63 91 79	==
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HF TOTAL AREA (ACRES) = 25 NOTE: PEAK FLOW RATE DER	B B B C C SILOSS RA SAREA FR 19.30 2466.5 R) = 0.2 635.60 FAULTED T	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, Fp(INC ACTION, AF SUBAREA 7 AREA-F 6 AREA-AC PEAK F 0 UPSTREAN	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0 0 = 1.00  A RUNOFF(CF: AVERAGED FM ZERAGED AP ZERAGED	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.70  1.00  1.00  1.00  30  31  31  32  33  34  35  36  37  37  38  38  38  38  38  38  38  38	SCS CN 86 69 65 63 91 79 60 = 0.25 538.92	
MAINTINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FD (INCH/HR TOTAL AREA (ACRES) = 25 NOTE: PEAK FLOW RATE DER	A A B B B B C C C S LOSS RA S AREA FR 12.406.5 R) = 0.2 335.60 FAULTED T	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, Fp(INC ACTION, AS SUBAREA 7  AREA-7 6  AREA-AV PEAK I 0 UPSTREAN	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0 0 = 1.00 A RUNOFF (CF, VERAGED Fm, VERAGED Ap : CLOW RATE (C. 4)  VALUE	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 69 65 63 91 79 60 = 0.25 538.92	
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HF TOTAL AREA (ACRES) = 25 NOTE: PEAK FLOW RATE DER	### A PROPERTY OF THE PROPERTY	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, Fp(INC ACTION, AF SUBAREI 7 AREA-AT PEAK FO 0 UPSTREAN  ***********************************	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0 0 = 1.00 0 A RUNOFF(CF, CF, VERAGED Fm, VERAGED Fm, VERAGED FM, VERAGED AP, VALUE  ***********************************	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  30  (INCH/HR)  FS) = 3  **********************************	SCS CN 86 69 65 63 91 79 60 = 0.25 538.92	**
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (A DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGED FP (INCH/HF TOTAL AREA (ACRES) = 25 NOTE: PEAK FLOW RATE DEF	A A B B B B C C S S S S S S S S S S S S S S	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  O.10  0.20  TE, FP(INCACTION, AK SUBAREI 7 AREA-7 6 AREA-AL PEAK FO UPSTREAN  ***********************************	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0 0 = 1.00  A RUNOFF (CF. AVERAGED FM  TERAGED AP  TENOW RATE (C. 4 VALUE	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  30  (INCH/HR)  FS) = 3  **********************************	SCS CN 86 69 65 63 91 79 60 = 0.25 538.92	**
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (I DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HE TOTAL AREA (ACRES) = 25 NOTE: PEAK FLOW RATE DEF  ***********************************	######################################	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, FP(INC ACTION, AR SUBAREA 7 AREA-A 6 AREA-A 16 AREA-A 17 O NODE  ***********************************	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0 0 = 1.00  A RUNOFF(CF- AVERAGED AP FILOW RATE (CI- 4 VALUE  ************  3154.00 II FLOW<	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  30  (INCH/HR)  0.97  FS) = 3  **********************************	SCS CN 86 69 65 63 91 79 60 = 0.25 538.92	**
MAINLINE TC (MIN) = 42.1  * 100 YEAR RAINFALL INTE SUBAREA LOSS RATE DATA (F DEVELOPMENT TYPE/ LAND USE AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" URBAN FAIR COVER "TURF" NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" SUBAREA AVERAGE PERVIOUS SUBAREA FAIR (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/HF TOTAL AREA (ACRES) = 25 NOTE: PEAK FLOW RATE DEF ************************************	### A TO MAIN  ### A	CH/HR) =  AREA (ACRES)  0.20  11.10  7.50  0.20  0.10  0.20  TE, Fp(INC ACTION, AF SUBAREP 7 AREA-AL PEAK FO 0 UPSTREAN  *********** TO NODE  LINE PEAK	1.831  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.25  0.25  CH/HR) = 0 0 = 1.00  A RUNOFF (CFM VERAGED AP FLOW RATE (CM VALUE  **********  3154.00 I	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  30  (INCH/HR)  0.97  FS) = 3  **********************************	SCS CN 86 69 65 63 91 79 60 = 0.25 538.92	**

						_
SUBAREA LOSS RATE DATA(	AMC II):		_			
DEVELOPMENT TYPE/	SCS SOIL	AREA	(TNCH/UD)	Ap	SCS	
LAND USE URBAN FAIR COVER	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
"TURF"	C	0.50	0.25	1 00	77	
NATURAL FAIR COVER	C	0.50	0.25	1.00	, ,	
"CHAPARRAL, BROADLEAF" AGRICULTURAL POOR COVER		3.70	0.25	1.00	75	
"FALLOW"		2 70	0.20	1 00	9.4	
NATURAL FAIR COVER	D	2.70	0.20	1.00	J 1	
"GRASS"	D	6.30	0.20	1.00	84	
URBAN FAIR COVER						
"TURF"	D	0.20	0.20	1.00	82	
SUBAREA AVERAGE PERVIOU				.22		
SUBAREA AVERAGE PERVIOU						
SUBAREA AREA(ACRES) =						
EFFECTIVE AREA(ACRES) =					0.25	
AREA-AVERAGED Fp(INCH/H TOTAL AREA(ACRES) = 2					20 00	
NOTE: PEAK FLOW RATE DE				15) = 33	138.92	
NOIE. FEAR FLOW RATE DE	FAULIED I	J OFSIKEAL	M VALUE			
******	*****	*****	****	******	*****	
FLOW PROCESS FROM NODE	3154.00	TO NODE	3155.00 I	S CODE = 5	51	
>>>>COMPUTE TRAPEZOIDA	L CHANNEL	FLOW<<<<	<			
>>>>TRAVELTIME THRU SU	BAREA (EX	ISTING ELE	EMENT) <<<<			
ELEVATION DATA: UPSTREA						
CHANNEL LENGTH THRU SUB	AREA (FEET	) = 712	.00 CHANN	EL SLOPE =	0.0070	
CHANNEL BASE (FEET) =						
MANNING'S FACTOR = 0.04				.00		
CHANNEL FLOW THRU SUBAR						
FLOW VELOCITY (FEET/SEC.				= 9.58		
TRAVEL TIME (MIN.) = 1				00 - 00500	00 BBBB	
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N				00 = 28528.	00 FEET.	
	ODE 310	0.00 TO NO	ODE 3155.			
LONGEST FLOWPATH FROM N	ODE 310	0.00 TO NO	ODE 3155.	*****	*****	
LONGEST FLOWPATH FROM N	ODE 310  ****** 3154.00	0.00 TO NO ************ TO NODE	ODE 3155.  *********** 3155.00 I	********* S CODE = 8	*********	
LONGEST FLOWPATH FROM N ************************************	**************************************	0.00 TO NO ******* TO NODE	3155.00 3155.00 I	********* S CODE = 8	*********	
LONGEST FLOWPATH FROM N  *****************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE	********** 3154.00 A TO MAIN:	0.00 TO NO *******  TO NODE LINE PEAK	3155.00 IS 3155.00 IS FLOW<	******** S CODE = 8	:******** 1 	
LONGEST FLOWPATH FROM N  *****************  FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBARE  MAINLINE TC(MIN) = 43.	ODE 310  *******  3154.00   A TO MAIN: ====================================	0.00 TO NO *******  TO NODE LINE PEAK	3155.00 I: 3155.00 I: FLOW<<<<	******** S CODE = 8	:******** 1 	
LONGEST FLOWPATH FROM N  *****************  FLOW PROCESS FROM NODE	ODE 310  *******  3154.00   A TO MAIN  ===================================	0.00 TO NO *******  TO NODE LINE PEAK CH/HR) =	3155.00 I: 3155.00 I: FLOW<<<<	******** S CODE = 8	:******** 1 	
LONGEST FLOWPATH FROM N  *******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 43.  * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA(	ODE 310  *******  3154.00	0.00 TO NO ********  TO NODE LINE PEAK	3155.00 I: 3155.00 I: FLOW<<<< 1.805	*********** S CODE = 8	***************************************	
LONGEST FLOWPATH FROM N  *******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 43.  * 100 YEAR RAINFALL INT  SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/	0DE 310  ******** 3154.00	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA	3155.00 IS FLOW<<<<  1.805 Fp	************ S CODE = 8	**************************************	
LONGEST FLOWPATH FROM N  *******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 43.  * 100 YEAR RAINFALL INT  SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/  LAND USE	0DE 310  ******** 3154.00  A TO MAIN: ====================================	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA	3155.00 I: 3155.00 I: FLOW<<<< 1.805	************ S CODE = 8	**************************************	
LONGEST FLOWPATH FROM N  ********************  FLOW PROCESS FROM NODE	ODE 310  ******* 3154.00  A TO MAIN  ENSITY(IN  AMC II): SCS SOIL  GROUP	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA  (ACRES)	3155.00 IS STANDARD S	*********** S CODE = 8	**************************************	
LONGEST FLOWPATH FROM N  *******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC(MIN) = 43.  * 100 YEAR RAINFALL INT SUBAREA LOSS RATE DATA( DEVELOPMENT TYPE/ LAND USE  AGRICULTURAL POOR COVER "FALLOW"	ODE 310  ******* 3154.00  A TO MAIN  ENSITY(IN  AMC II): SCS SOIL  GROUP	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA  (ACRES)	3155.00 IS FLOW<<<<  1.805 Fp	*********** S CODE = 8	**************************************	
LONGEST FLOWPATH FROM N  *******************  FLOW PROCESS FROM NODE	ODE 310  *******  3154.00  A TO MAIN:  ===================================	0.00 TO NO ******** TO NODE LINE PEAK	3155.00 II  *********  3155.00 II  FLOW<<<<  1.805  Fp (INCH/HR)  0.30	**********  S CODE = 8  Ap (DECIMAL)  1.00	**************************************	
LONGEST FLOWPATH FROM N  ********************  FLOW PROCESS FROM NODE	ODE 310  *******  3154.00  A TO MAIN:  ===================================	0.00 TO NO ******** TO NODE LINE PEAK	3155.00 II  *********  3155.00 II  FLOW<<<<  1.805  Fp (INCH/HR)  0.30	**********  S CODE = 8  Ap (DECIMAL)  1.00	**************************************	
LONGEST FLOWPATH FROM N  ****************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 43.  * 100 YEAR RAINFALL INT  SUBAREA LOSS RATE DATA ( DEVELOPMENT TYPE/  LAND USE  AGRICULTURAL POOR COVER  "FALLOW"  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"  NATURAL FAIR COVER	ODE 310  ******** 3154.00	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.50  8.30	3155.00 IS  **********  3155.00 IS  FLOW<  1.805  Fp (INCH/HR)  0.30  0.30	Ap (DECIMAL)  1.00  1.00	SCS CN 86	
LONGEST FLOWPATH FROM N  *******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  ***********************************	ODE 310  ******** 3154.00	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.50  8.30	3155.00 II  *********  3155.00 II  FLOW<<<<  1.805  Fp (INCH/HR)  0.30	Ap (DECIMAL)  1.00  1.00	SCS CN 86	
LONGEST FLOWPATH FROM N  ****************  FLOW PROCESS FROM NODE	ODE 310  *******  3154.00  A TO MAIN: ENSITY(IN: AMC II): SCS SOIL GROUP  B B B	0.00 TO NO ******** TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.50 8.30 23.90	3155.00 II 3155.00 II FLOW<<<<  1.805 Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00	scs cn 86 63	
LONGEST FLOWPATH FROM N  ******************  FLOW PROCESS FROM NODE	ODE 310  *******  3154.00  A TO MAIN: ENSITY(IN: AMC II): SCS SOIL GROUP  B B B	0.00 TO NO ******** TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.50 8.30 23.90	3155.00 IS  **********  3155.00 IS  FLOW<  1.805  Fp (INCH/HR)  0.30  0.30	Ap (DECIMAL) 1.00 1.00	scs cn 86 63	
LONGEST FLOWPATH FROM N  *******************  FLOW PROCESS FROM NODE	ODE 310  ******** 3154.00  A TO MAIN  ENERGY (IN  AMC II): SCS SOIL GROUP  B  B  B  B	0.00 TO NO ******** TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.50 8.30 23.90 19.70	3155.00 IS ********** 3155.00 IS FLOW<<<<  1.805 Fp (INCH/HR) 0.30 0.30 0.30 0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00	SCS CN 86 63 69	
LONGEST FLOWPATH FROM N  ****************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  ***********************************	ODE 310  ******** 3154.00	0.00 TO NO ******** TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.50 8.30 23.90	3155.00 II 3155.00 II FLOW<<<<  1.805 Fp (INCH/HR) 0.30 0.30 0.30	Ap (DECIMAL) 1.00 1.00	scs cn 86 63	
LONGEST FLOWPATH FROM N  *****************  FLOW PROCESS FROM NODE	ODE 310  *******  3154.00	0.00 TO NO ******** TO NODE LINE PEAK AREA (ACRES) 0.50 8.30 23.90 19.70 2.20	3155.00 II ********** 3155.00 II FLOW<<<<<  1.805 Fp (INCH/HR) 0.30 0.30 0.30 0.30 0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00	SCS CN 86 63 69 65	
LONGEST FLOWPATH FROM N  *****************  FLOW PROCESS FROM NODE	ODE 310  ********  3154.00  A TO MAIN:  ===================================	0.00 TO NO ******** TO NODE TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.50 8.30 23.90 19.70 2.20 0.40	3155.00 II ********** 3155.00 II FLOW<<<<<  1.805 Fp (INCH/HR) 0.30 0.30 0.30 0.30 0.30 0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 63 69 65	
LONGEST FLOWPATH FROM N  *********************  FLOW PROCESS FROM NODE	ODE 310  ******** 3154.00	0.00 TO NO ******** TO NODE TO NODE LINE PEAK AREA (ACRES) 0.50 8.30 23.90 19.70 2.20 0.40 TE, FP(ING	DDE 3155.  **********  3155.00 I:  FLOW<<<<<  1.805  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.30  0.30  0.40  0.30  0.30  0.30  0.30  0.30  0.30  0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 63 69 65	
LONGEST FLOWPATH FROM N  ********************  FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBARE  ***********************************	ODE 310  ******** 3154.00	0.00 TO NO ********* TO NODE LINE PEAK	DDE 3155.  **********  3155.00 IS  FLOW<  1.805  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30  0.30	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 63 69 65 66	
LONGEST FLOWPATH FROM N  *********************  FLOW PROCESS FROM NODE	ODE 310  ******** 3154.00	0.00 TO NO ******** TO NODE TO NODE TO NODE TO NODE TO NODE TO NODE AREA (ACRES) 0.50 8.30 23.90 19.70 2.20 0.40 TE, Fp(INCACTION, AND SUBAREZ) 7 AREA-2	3155.*  *********  3155.00 II  FLOW<<<<<  1.805  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.30  0.40  0.40  0.50  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.4	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  30  S) = 74.5 (INCH/HR) =	SCS CN 86 63 69 65 66 69	
LONGEST FLOWPATH FROM N  ********************  FLOW PROCESS FROM NODE  >>>>>ADDITION OF SUBARE  ***********************************	ODE 310  ******** 3154.00	0.00 TO NO ******** TO NODE TO NODE TO NODE TO NODE TO NODE TO NODE AREA (ACRES) 0.50 8.30 23.90 19.70 2.20 0.40 TE, Fp(INCACTION, AND SUBAREZ) 7 AREA-2	3155.*  *********  3155.00 II  FLOW<<<<<  1.805  Fp (INCH/HR)  0.30  0.30  0.30  0.30  0.30  0.40  0.40  0.50  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.4	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  30  S) = 74.5 (INCH/HR) =	SCS CN 86 63 69 65 66 69	
LONGEST FLOWPATH FROM N  *********************  FLOW PROCESS FROM NODE	ODE 310  ******** 3154.00  A TO MAIN  25  ENSITY (IN  AMC II): SCS SOIL  GROUP  B  B  B  B  B  S LOSS RA S AREA FR 55.00 2534.9' R) = 0.2	0.00 TO NO ******** TO NODE LINE PEAK CH/HR) = AREA (ACRES) 0.50 8.30 23.90 19.70 2.20 0.40 TE, Fp(INC ACTION, AF SUBAREI 7 AREA-AT 6 AREA-AT	3155.*  *********  3155.00 I:  FLOW<<<<<	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 63 69 65 66 69 65 60 0.25	
LONGEST FLOWPATH FROM N  ******************  FLOW PROCESS FROM NODE	ODE 310  ******** 3154.00	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.50  8.30  23.90  19.70  2.20  0.40  TE, FP(INC ACTION, AF SUBAREZ 7 AREA-2 6 AREA-AT PEAK 1	3155.00 II *********** 3155.00 II FLOW< <	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 63 69 65 66 69 65 66 69	
LONGEST FLOWPATH FROM N  *********************  FLOW PROCESS FROM NODE	ODE 310  ******** 3154.00	0.00 TO NO  ********  TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  0.50  8.30  23.90  19.70  2.20  0.40  TE, FP(INC ACTION, AF SUBAREZ 7 AREA-2 6 AREA-AT PEAK 1	3155.00 II *********** 3155.00 II FLOW< <	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	SCS CN 86 63 69 65 66 69 65 66 69	

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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 43.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.805
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND"
                     B
                           0.20
                                   0.30
                                          1.00
                                                60
 AGRICULTURAL POOR COVER
 "FALLOW"
                           6.60
                                   0.25
                                          1.00 91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          48.20
                                   0.25
                                          1.00
 NATURAL POOR COVER
 "BARREN"
                           3.50
                                   0.25
                                          1.00
                                                91
 NATURAL FAIR COVER
 "GRASS"
                          25.70
                                 0.25 1.00 79
 URBAN FAIR COVER
 "TURF"
                    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) = 84.40 SUBAREA RUNOFF(CFS) = 118.12
 EFFECTIVE AREA(ACRES) = 2619.37 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 2688.40 PEAK FLOW RATE(CFS) = 3663.89
*****************
 FLOW PROCESS FROM NODE 3154.00 TO NODE 3155.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 43.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.805
 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
 "OPEN BRUSH"
                           78.70
                                   0.25
                                          1.00 77
 AGRICULTURAL FAIR COVER
                          11.40
                                   0.25
                                          1.00 79
 "PASTURE, DRYLAND"
 NATURAL FAIR COVER
 "WOODLAND"
                           1.10
                                  0.25
                                          1.00 73
 AGRICULTURAL POOR COVER
 "FALLOW"
                     D
                           0.90
                                 0.20
                                          1 00 94
 NATURAL FAIR COVER
 "GRASS"
                           6.40 0.20 1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          1.00 0.20 1.00 83
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 99.50 SUBAREA RUNOFF(CFS) = 139.64
 EFFECTIVE AREA(ACRES) = 2718.87 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 2787.90 PEAK FLOW RATE (CFS) = 3803.53
******************
 FLOW PROCESS FROM NODE 3154.00 TO NODE 3155.00 IS CODE = 81
.....
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 43.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.805
 SUBAREA LOSS RATE DATA(AMC II):
                  SCS SOIL AREA
                                        Ap SCS
 DEVELOPMENT TYPE/
                                  Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL FAIR COVER
```

"PASTURE, DRYLAND"	-	10.00	0.00	1 00	0.4
NATURAL FAIR COVER	D	12.60	0.20	1.00	84
"CHAPARRAL, BROADLEAF"			0.20		81
SUBAREA AVERAGE PERVIOU				.20	
SUBAREA AVERAGE PERVIOU	S AREA FF	ACTION, Ap	DIMOFFICE	s) = 48	3.0
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	2752.3	7 AREA-A	VERAGED Fm	(INCH/HR)	= 0.25
AREA-AVERAGED Fp(INCH/H	R) = 0.2	6 AREA-AV	/ERAGED Ap	= 0.97	
TOTAL AREA(ACRES) = 2	821.40	PEAK I	FLOW RATE (C	FS) = 3	851.92
*****	*****	*****	*****	*****	****
FLOW PROCESS FROM NODE	3155.00	TO NODE	3156.00 I	S CODE =	51
>>>>COMPUTE TRAPEZOIDA >>>>TRAVELTIME THRU SU					
					========
ELEVATION DATA: UPSTREA					
CHANNEL LENGTH THRU SUB CHANNEL BASE (FEET) =				EL SLOPE =	0.0472
MANNING'S FACTOR = 0.04				.00	
CHANNEL FLOW THRU SUBAR					
FLOW VELOCITY (FEET/SEC.				= 5.83	
TRAVEL TIME (MIN.) = 0 LONGEST FLOWPATH FROM N				00 = 28952	.00 FEET.
		1.00 10 10	0100.	20002	
*****					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBARE					
MAINLINE Tc(MIN) = 43. * 100 YEAR RAINFALL INT		ICU/UD) —	1 700		
SUBAREA LOSS RATE DATA(			1.790		
DEVELOPMENT TYPE/ LAND USE	SCS SOII	AREA	Fp	Ap	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
AGRICULTURAL POOR COVER "FALLOW"		0.40	0.30	1.00	86
NATURAL FAIR COVER					
"GRASS"	В	15.00	0.30	1.00	69
URBAN FAIR COVER "TURF"	B	13 10	0.30	1 00	65
NATURAL FAIR COVER					
"CHAPARRAL, BROADLEAF"	В	0.60	0.30	1.00	63
NATURAL FAIR COVER	C	2 10	0.25	1 00	7.0
"GRASS" URBAN FAIR COVER	C	3.10	0.25	1.00	79
"TURF"	С	0.20	0.25	1.00	77
SUBAREA AVERAGE PERVIOU	S LOSS RA	TE, Fp(INC	CH/HR) = 0	.29	
SUBAREA AVERAGE PERVIOU					
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	32.40	SUBAREA	RUNOFF (CF	S) = 43.3	82
AREA-AVERAGED Fp(INCH/H	2/64.7 R) = 0.2	AREA-A	veraged fm /ERAGED Ap	(INCH/HK): = 0.97	- 0.23
TOTAL AREA(ACRES) = 2	853.80	PEAK I	FLOW RATE (C	FS) = 3	876.97
******	المستسههه				****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBARE					
MAINLINE Tc(MIN) = 43.					
* 100 YEAR RAINFALL INT		ICH/HR) =	1.798		
SUBAREA LOSS RATE DATA(	AMC II):				
DEVELOPMENT TYPE/	SCS SOII	AREA	Fp (INCH/HR)	Ap	SCS
LAND USE NATURAL FAIR COVER	GKUUP	(ACKES)	(INCH/HK)	(DECIMAL)	CIN
"OPEN BRUSH"	С	0.50	0.25	1.00	77
NATURAL FAIR COVER					

"CHAPARRAL, BROADLEAF" NATURAL FAIR COVER	С	2.40	0.25	1.00	75	
"GRASS" URBAN FAIR COVER	D	11.40	0.20	1.00	84	
"TURF"	D	1.10	0.20	1.00	82	
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"					81	
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS	AREA FF	RACTION, Ap	= 1.00			
SUBAREA AREA(ACRES) =						
EFFECTIVE AREA(ACRES) = AREA-AVERAGED Fp(INCH/HFTOTAL AREA(ACRES) = 28	(1) = 0.2	6 AREA-AVI	ERAGED Ap =	= 0.97		
**************************************						
>>>>COMPUTE TRAPEZOIDAL						
>>>>TRAVELTIME THRU SUE	BAREA (EX	XISTING ELEN	MENT) <<<<		========	
ELEVATION DATA: UPSTREAM CHANNEL LENGTH THRU SUBACHANNEL BASE(FEET) = 2 MANNING'S FACTOR = 0.040 (CHANNEL FLOW THRU SUBARE FLOW VELOCITY(FEET/SEC.) TRAVEL TIME(MIN.) = 0. LONGEST FLOWPATH FROM NO	I(FEET) = AREA(FEET) 15.00 " MAXIM A(CFS) = 13.4	360.00 2) = 647.0 2" FACTOR = MUM DEPTH(FF 3918.39 6 FLOW DE MIN.) = 44	DOWNSTREADO CHANNE 1.000 EET) = 10.000 EET) = 10.000 EPTH (FEET)	AM(FEET) = EL SLOPE = .000 = 8.65	352.00 0.0124	
**************************************						
>>>>ADDITION OF SUBAREA						
MAINLINE TC (MIN) = 44.3 * 100 YEAR RAINFALL INTE		ICH/HR) = 1	.779			
SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/			Fn	Ap	SCS	
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
NATURAL FAIR COVER "GRASS"	В	11.50	0.30	1.00	69	
URBAN FAIR COVER "TURF"	В	9.30	0.30	1.00	65	
NATURAL FAIR COVER		0.40				
AGRICULTURAL POOR COVER						
"FALLOW" NATURAL FAIR COVER	D	0.20	0.20	1.00	94	
"GRASS"	D	13.80	0.20	1.00	84	
URBAN FAIR COVER "TURF"	D	0.70	0.20	1.00	82	
SUBAREA AVERAGE PERVIOUS				.26		
SUBAREA AVERAGE PERVIOUS SUBAREA AREA(ACRES) =	AREA FF	RACTION, Ap	= 1.00	3) = 49	1 3	
EFFECTIVE AREA (ACRES) =	2849.5	7 AREA-A	/ERAGED Fm	(INCH/HR)	= 0.25	
AREA-AVERAGED Fp(INCH/HF		26 AREA-AVI		= 0.97	920.87	
**************************************						
>>>>ADDITION OF SUBAREA						
MAINLINE Tc (MIN) = 44.3						
* 100 YEAR RAINFALL INTE	NSITY(IN		.779			
SUBAREA LOSS RATE DATA(A			Flor	7)	000	
DEVELOPMENT TYPE/	SCS SOII	AREA	Fp	Ap	SCS	

```
LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" D
                          25.10 0.20 1.00 81
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 25.10 SUBAREA RUNOFF(CFS) = 35.67
 EFFECTIVE AREA(ACRES) = 2874.67 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 2943.70 PEAK FLOW RATE(CFS) = 3956.55
_____
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES) = 2943.70 TC(MIN.) = 44.39
 EFFECTIVE AREA (ACRES) = 2874.67 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 PEAK FLOW RATE (CFS) = 3956.55
 ** PEAK FLOW RATE TABLE **
 STREAM Q Tc Intensity Fp(Fm)
 STREAM Q TC Intensity Fp(Fm) Ap Ae HEADWATER NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
   1 3956.55 44.39 1.779 0.26(0.25) 0.97 2874.7 3120.00
   2 3698.90 50.26 1.646 0.26(0.25) 0.97 2943.7 3100.00
______
______
 END OF RATIONAL METHOD ANALYSIS
```

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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.
                    430 Exchange, Suite 200
                     Irvine, CA. 92602-1309
                       714 - 734 - 5100
* AREA 08 (PROPOSED CONDITION)
* 100-YEAR HIGH CONFIDENCE STORM EVENT
* CHIOUITTA
-----
 FILE NAME: CP08100H.DAT
 TIME/DATE OF STUDY: 07:33 04/01/2004
_____
 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 0.0312 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 EOUAL 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)
                              0.160
       VALLEY (DEVELOPED)
                                  0 140
       FOOTHILL.
                                  0.620
       MOUNTAIN
       VALLEY (UNDEVELOPED) / DESERT
                                  0.080
       DESERT (UNDEVELOPED)
                                   0.000
   SIERRA MADRE DEPTH-AREA FACTORS USED.
                AREA-AVERAGED
       DURATION RAINFALL (INCH)
      5-MINUTES
                0.52
                    1.09
      30-MINUTES
                    1.45
      1-HOUR
      3-HOUR
                    2.43
       6-HOUR
                    3.36
                    5.63
*ANTECEDENT MOISTURE CONDITION (AMC) II ASSUMED FOR UNIT HYDROGRAPH METHOD*
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FLOW PROCESS FROM NODE 800.00 TO NODE 801.00 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) = 445.00 DOWNSTREAM(FEET) = 420.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 6.957
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.120
 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
 "3-4 DWELLINGS/ACRE" C 0.20 0.25 0.60 69
                                                     6 96
 RESIDENTIAL
                  D 1.10 0.20 0.60 75
                                                     6.96
 "3-4 DWELLINGS/ACRE"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
 SUBAREA RUNOFF (CFS) = 5.84
 TOTAL AREA(ACRES) = 1.30 PEAK FLOW RATE(CFS) = 5.84
 FLOW PROCESS FROM NODE 801.00 TO NODE 802.00 IS CODE = 31
 >>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 420.00 DOWNSTREAM(FEET) = 390.00
 FLOW LENGTH (FEET) = 505.00 MANNING'S N = 0.013
 ESTIMATED PIPE DIAMETER (INCH) INCREASED TO 18.000
 DEPTH OF FLOW IN 18.0 INCH PIPE IS 6.0 INCHES
 PIPE-FLOW VELOCITY (FEET/SEC.) = 11.31
 ESTIMATED PIPE DIAMETER (INCH) = 18.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 5.84
 PIPE TRAVEL TIME (MIN.) = 0.74 Tc (MIN.) = 7.70
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 802.00 = 830.00 FEET.
*******************
FLOW PROCESS FROM NODE 801.00 TO NODE 802.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 7.70
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.840
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE" C 0.40 0.25 0.60 69
 RESIDENTIAL
                   D 1.10 0.20 0.60 75
 "3-4 DWELLINGS/ACRE"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
 SUBAREA AREA (ACRES) = 1.50 SUBAREA RUNOFF (CFS) = 6.36
 EFFECTIVE AREA(ACRES) = 2.80 AREA-AVERAGED Fm(INCH/HR) = 0.13
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.60
 TOTAL AREA(ACRES) = 2.80 PEAK FLOW RATE(CFS) = 11.88
-----
 FLOW PROCESS FROM NODE 802.00 TO NODE 803.00 IS CODE = 31
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW) <<<<
```

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______
 ELEVATION DATA: UPSTREAM(FEET) = 390.00 DOWNSTREAM(FEET) = 360.00
 FLOW LENGTH (FEET) = 501.00 MANNING'S N = 0.013
 ESTIMATED PIPE DIAMETER (INCH) INCREASED TO 18.000
 DEPTH OF FLOW IN 18.0 INCH PIPE IS 8.9 INCHES
 PIPE-FLOW VELOCITY (FEET/SEC.) = 13.71
 ESTIMATED PIPE DIAMETER(INCH) = 18.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 11.88
 PIPE TRAVEL TIME (MIN.) = 0.61 Tc (MIN.) = 8.31
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 803.00 = 1331.00 FEET.
*****
 FLOW PROCESS FROM NODE 802.00 TO NODE 803.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 8.31
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.660
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE" C 1.80 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 = 0.60
 SUBAREA AREA(ACRES) = 2.90 SUBAREA RUNOFF(CFS) = 11.80
 EFFECTIVE AREA(ACRES) = 5.70 AREA-AVERAGED Fm(INCH/HR) = 0.13
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.60
 TOTAL AREA (ACRES) = 5.70 PEAK FLOW RATE (CFS) = 23.23
************************
 FLOW PROCESS FROM NODE 803.00 TO NODE 804.00 IS CODE = 31
 >>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 360.00 DOWNSTREAM(FEET) = 340.00
 FLOW LENGTH (FEET) = 323.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 18.0 INCH PIPE IS 13.8 INCHES
 PIPE-FLOW VELOCITY (FEET/SEC.) = 15.95
 ESTIMATED PIPE DIAMETER (INCH) = 18.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 23.23
 PIPE TRAVEL TIME (MIN.) = 0.34 Tc (MIN.) = 8.65
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 804.00 = 1654.00 FEET.
FLOW PROCESS FROM NODE 803.00 TO NODE 804.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 8.65
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.560
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE" C 2.00 0.25 0.60 69
 RESIDENTIAL.
 "3-4 DWELLINGS/ACRE" D 2.20 0.20 0.60 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
 SUBAREA AREA(ACRES) = 4.20 SUBAREA RUNOFF(CFS) = 16.73
 EFFECTIVE AREA(ACRES) = 9.90 AREA-AVERAGED Fm(INCH/HR) = 0.13
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.60
 TOTAL AREA(ACRES) = 9.90 PEAK FLOW RATE(CFS) =
                                               39 44
```

```
*******************
 FLOW PROCESS FROM NODE 804.00 TO NODE 805.00 IS CODE = 31
______
 >>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 340.00 DOWNSTREAM(FEET) = 320.00
 FLOW LENGTH (FEET) = 349.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 24.0 INCH PIPE IS 15.8 INCHES
 PIPE-FLOW VELOCITY (FEET/SEC.) = 18.03
 ESTIMATED PIPE DIAMETER (INCH) = 24.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 39.44
 PIPE TRAVEL TIME (MIN.) = 0.32 Tc (MIN.) = 8.97
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 805.00 = 2003.00 FEET.
FLOW PROCESS FROM NODE 804.00 TO NODE 805.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 8.97
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.465
 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"
                       0.40
                              0.25
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE" D 3.10 0.20 0.60 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
 SUBAREA AREA(ACRES) = 3.50 SUBAREA RUNOFF(CFS) = 13.67
 EFFECTIVE AREA(ACRES) = 13.40 AREA-AVERAGED Fm(INCH/HR) = 0.13
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.60
 TOTAL AREA(ACRES) = 13.40
                      PEAK FLOW RATE(CFS) =
FLOW PROCESS FROM NODE 805.00 TO NODE 806.00 IS CODE = 31
______
 >>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 320.00 DOWNSTREAM(FEET) = 300.00
 FLOW LENGTH (FEET) = 422.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 27.0 INCH PIPE IS 18.6 INCHES
 PIPE-FLOW VELOCITY (FEET/SEC.) = 17.94
 ESTIMATED PIPE DIAMETER (INCH) = 27.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 52.27
 PIPE TRAVEL TIME (MIN.) = 0.39 Tc (MIN.) = 9.36
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 806.00 = 2425.00 FEET.
*******************
FLOW PROCESS FROM NODE 805.00 TO NODE 806.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 9.36
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.349
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fρ
                                     Aρ
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE" C 0.70
                                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) = 0.22
```

```
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
 SUBAREA AREA(ACRES) = 1.80 SUBAREA RUNOFF(CFS) = 6.83
 EFFECTIVE AREA(ACRES) = 15.20 AREA-AVERAGED Fm(INCH/HR) = 0.13
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.60
 TOTAL AREA(ACRES) =
                  15.20
                           PEAK FLOW RATE(CFS) =
*****
 FLOW PROCESS FROM NODE 806.00 TO NODE 807.00 IS CODE = 31
 >>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW) <<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 300.00 DOWNSTREAM(FEET) = 290.00
 FLOW LENGTH (FEET) = 290.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 30.0 INCH PIPE IS 20.3 INCHES
 PIPE-FLOW VELOCITY (FEET/SEC.) = 16.35
 ESTIMATED PIPE DIAMETER (INCH) = 30.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) =
               57.70
 PIPE TRAVEL TIME (MIN.) = 0.30 Tc (MIN.) = 9.66
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 807.00 = 2715.00 FEET.
************************
FLOW PROCESS FROM NODE 806.00 TO NODE 807.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC (MIN) = 9.66
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.261
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                  C 3.20
                                 0.25
                                         0.60 69
 RESIDENTIAL.
 "3-4 DWELLINGS/ACRE"
                   D
                         10.10
                                 0.20
                                          0.60 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.60
 SUBAREA AREA(ACRES) = 13.30
                          SUBAREA RUNOFF(CFS) = 49.48
 EFFECTIVE AREA(ACRES) = 28.50 AREA-AVERAGED Fm(INCH/HR) = 0.13
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.60
 TOTAL AREA(ACRES) = 28.50
                          PEAK FLOW RATE(CFS) = 105.98
***********************
 FLOW PROCESS FROM NODE 807.00 TO NODE 808.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 290.00 DOWNSTREAM(FEET) = 250.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 323.00 CHANNEL SLOPE = 0.1238
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 105.98
 FLOW VELOCITY (FEET/SEC.) = 13.38 FLOW DEPTH (FEET) = 1.99
 TRAVEL TIME (MIN.) = 0.40 Tc (MIN.) = 10.06
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 808.00 = 3038.00 FEET.
*****
 FLOW PROCESS FROM NODE 807.00 TO NODE 808.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 10.06
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.148
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fρ
                                          Aр
                                                SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
```

NATURAL FAIR COVER "OPEN BRUSH"	С	0.20	0.25	1.00	77
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"		0.20	0.25	1 00	79
RESIDENTIAL	C	0.20	0.23	1.00	, ,
"3-4 DWELLINGS/ACRE"	С	2.80	0.25	0.60	69
NATURAL FAIR COVER "WOODLAND"	С	0.40	0.25	1.00	73
NATURAL FAIR COVER "GRASS"	D	0.20	0.20	1.00	8.4
AGRICULTURAL FAIR COVER					
"PASTURE, DRYLAND" SUBAREA AVERAGE PERVIOUS					84
SUBAREA AVERAGE PERVIOUS				, 15	0.1
SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =					
AREA-AVERAGED Fp (INCH/HR	) = 0.22	AREA-AV	ERAGED Ap =	0.62	
TOTAL AREA(ACRES) =	32.70	PEAK F	LOW RATE (CF	S) =	118.09
******	*****	*****	*****	*****	*****
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAREA	TO MAINI	INE PEAK	FLOW<		
MAINLINE Tc(MIN) = 10.0				======	=======
* 100 YEAR RAINFALL INTE	NSITY(INC		4.148		
SUBAREA LOSS RATE DATA(A) DEVELOPMENT TYPE/	MC II):	7057	Fn	Λn	aca
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
RESIDENTIAL					
"3-4 DWELLINGS/ACRE" SUBAREA AVERAGE PERVIOUS					75
SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS				20	
SUBAREA AREA(ACRES) =	8.20	SUBAREA	RUNOFF (CFS	) = 29.	73
EFFECTIVE AREA (ACRES) =	40.90	AREA-A	/ERAGED Fm (	INCH/HR) :	= 0.13
AREA-AVERAGED Fp(INCH/HR TOTAL AREA(ACRES) =					147.82
**************************************					
>>>>COMPUTE TRAPEZOIDAL >>>>TRAVELTIME THRU SUB.					
ELEVATION DATA: UPSTREAM CHANNEL LENGTH THRU SUBA					
CHANNEL LENGTH THRO SUBA.  CHANNEL BASE (FEET) =				L SLOPE =	0.0894
MANNING'S FACTOR = 0.040	MAXIMU	M DEPTH (F	EET) = 3.	00	
CHANNEL FLOW THRU SUBARE. FLOW VELOCITY (FEET/SEC.)	A(CFS) =	147.82		0.01	
TRAVEL TIME (MIN.) = 0.				= 2,21	
LONGEST FLOWPATH FROM NO				0 = 3653	.00 FEET.
******	******	*****	*****	*****	*****
FLOW PROCESS FROM NODE	808.00	TO NODE	809.00 IS	CODE =	81
>>>>ADDITION OF SUBAREA					
W2 TVI TVI TV (WTV) 10 0					=======
MAINLINE Tc(MIN) = 10.8 * 100 YEAR RAINFALL INTE		'H/HR) =	3 988		
SUBAREA LOSS RATE DATA(A		,,			
	SCS SOIL		Fp (	Ap	SCS
LAND USE NATURAL FAIR COVER	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
"GRASS"	A	0.40	0.40	1.00	50
NATURAL FAIR COVER	7	C 00	0.40	1 00	4.0
"OPEN BRUSH"	A	6.90	0.40	1.00	46

г							
	AGRICULTURAL FAIR COVER	Δ	4 40	0.40	1 00	49	
	"PASTURE, DRYLAND" NATURAL FAIR COVER		1.10	0.10	1.00	13	
	"WOODLAND"	A	12.00	0.40	1.00	36	
ļ	NATURAL FAIR COVER						
ļ	"GRASS"	В	4.00	0.30	1.00	69	
	NATURAL FAIR COVER "OPEN BRUSH" SUBAREA AVERAGE PERVIOUS						
ı	"OPEN BRUSH"	В	1.40	0.30	1.00	66	
ı					. 38		
	SUBAREA AVERAGE PERVIOUS	AKEA FF 29 10	ACTION, AL	DIMOFFICE	3) = 94	47	
	SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) =	70.0	O AREA-A	VERAGED Fm	(TNCH/HR)	= 0.24	
ı	AREA-AVERAGED Fp(INCH/HR						
ı	TOTAL AREA(ACRES) =					236.41	
ı							
	*****************						***
	FLOW PROCESS FROM NODE						
	>>>>ADDITION OF SUBAREA						
							===
	MAINLINE Tc (MIN) = 10.8	6					
	* 100 YEAR RAINFALL INTE			3.988			
	SUBAREA LOSS RATE DATA(A			Es	7	000	
	DEVELOPMENT TYPE/ LAND USE	CBUILD	(ACRES)	(TNCH/HP)	(DECIMAL)	CN	
ı	AGRICULTURAL FAIR COVER	GIOOI	(ACICES)	(INCII/III()	(DECIPAL)	CN	
ı	"PASTURE, DRYLAND"	В	16.90	0.30	1.00	69	
	"PASTURE, DRYLAND" NATURAL FAIR COVER "WOODLAND"						
ı	110000011110	В	6.20	0.30	1.00	60	
ı	NATURAL POOR COVER						
ı	"BARREN"	С	0.10	0.25	1.00	91	
	NATURAL FAIR COVER "GRASS"	C	67 20	0.25	1 00	79	
			67.20	0.23	1.00	19	
ı	"OPEN BRUSH"	С	10.00	0.25	1.00	77	
ı	COMMERCIAL	C	5.20	0.25 0.25	0.10	69	
	SUBAREA AVERAGE PERVIOUS				.26		
	SUBAREA AVERAGE PERVIOUS	AREA FF	RACTION, Ap	0.96			
	SUBAREA AREA(ACRES) = 1 EFFECTIVE AREA(ACRES) =	05.60	SUBAREA	RUNOFF (CFS	(5) = 355.	31	
ı	AREA-AVERAGED Fp(INCH/HR					= 0.24	
ı	TOTAL AREA (ACRES) = 1	75.60	PEAK F	LOW RATE (C)	- 0.00 FS) =	591.72	
	, ,			,	- ,		
	******						***
	FLOW PROCESS FROM NODE						
	>>>>ADDITION OF SUBAREA						
							===
	MAINLINE Tc (MIN) = 10.8						
	* 100 YEAR RAINFALL INTE		ICH/HR) =	3.988			
	SUBAREA LOSS RATE DATA(A	MC II):	:				
	DEVELOPMENT TYPE/ LAND USE	SCS SOII	AREA	Fp	Ap	SCS	
ı	LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
ı	AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	C	1 50	0.25	1 00	7.9	
ı	RESIDENTIAL	C	1.50	0.25	1.00	13	
ı	"11+ DWELLINGS/ACRE"	С	17.90	0.25	0.20	69	
ı	RESIDENTIAL						
ı	"3-4 DWELLINGS/ACRE"	C	1.30	0.25	0.60	69	
l	NATURAL FAIR COVER	~	46.00	0 0=			
l	"WOODLAND"	С	46.80	0.25	1.00	73	
l	NATURAL FAIR COVER "GRASS"	D	2 70	0.20	1 00	84	
l	NATURAL FAIR COVER	ע	2.70	0.20	1.00	0.4	
l	"OPEN BRUSH"	D	11.10	0.20	1.00	83	
l	SUBAREA AVERAGE PERVIOUS						
l	SUBAREA AVERAGE PERVIOUS						
-					-		

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SUBAREA AREA(ACRES) = 81.30 SUBAREA RUNOFF(CFS) = 277.50 EFFECTIVE AREA(ACRES) = 256.90 AREA-AVERAGED Fm(INCH/HR) = 0.23
 AREA-AVERAGED Fp(INCH/HR) = 0.27 AREA-AVERAGED Ap = 0.86
 TOTAL AREA(ACRES) = 256.90 PEAK FLOW RATE(CFS) =
FLOW PROCESS FROM NODE 808.00 TO NODE 809.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 10.86
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.988
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                        Ap
                                               SCS
   LAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
                         0.10 0.20
 PUBLIC PARK
                   D
                                        0.85
 RESIDENTIAL
 "11+ DWELLINGS/ACRE" D 0.30 0.20
                                          0.20 75
 AGRICULTURAL FAIR COVER
                  D 0.60 0.20 1.00
 "PASTURE, DRYLAND"
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE" D 19.50 0.20 0.60 75
 NATURAL FAIR COVER
 "WOODLAND"
                    D
                         12.20 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.75
 SUBAREA AREA(ACRES) = 32.70 SUBAREA RUNOFF(CFS) = 112.94
 EFFECTIVE AREA(ACRES) = 289.60 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.85
 TOTAL AREA(ACRES) = 289.60 PEAK FLOW RATE(CFS) =
*******************
 FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 195.00 DOWNSTREAM(FEET) = 176.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 6031.00 CHANNEL SLOPE = 0.0032
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 982.16
 FLOW VELOCITY (FEET/SEC.) = 4.70 FLOW DEPTH (FEET) = 2.33
 TRAVEL TIME (MIN.) = 21.40 Tc (MIN.) = 32.25
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 826.00 = 9684.00 FEET.
*****
 FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 32.25
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.134
 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
                         0.90 0.40
 "OPEN BRUSH"
                                        1.00 46
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                  A
                          0.10 0.40
                                        1.00 49
 NATURAL FAIR COVER
 "WOODLAND"
                           5.20
                                0.40
                                         1.00 36
 NATURAL FAIR COVER
 "GRASS"
                           6.60
                                0.30
                                         1.00
                                                69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          1.70 0.30
                                        1.00 66
 AGRICULTURAL FAIR COVER
```

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"PASTURE, DRYLAND"
                В
                             0.40
                                   0.30
                                            1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.34
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 14.90 SUBAREA RUNOFF(CFS) = 24.04
 EFFECTIVE AREA(ACRES) = 304.50 AREA-AVERAGED Fm(INCH/HR) = 0.23
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.86
 TOTAL AREA(ACRES) = 304.50
                            PEAK FLOW RATE(CFS) = 982.16
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****************
 FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE To (MIN) = 32.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.134
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                  Fρ
                                           Ap
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                           10.30
 "WOODLAND"
                      В
                                     0.30
                                            1.00
                                                   60
 NATURAL FAIR COVER
                                   0.25
 "GRASS"
                           143.90
                     C
                                            1.00
                                                   79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           11.30
                                   0.25
                                            1.00
                                                   77
                     C
                           2.90
 COMMERCIAL
                                   0.25
                                            0.10 69
                     C
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           0.20
                                   0.25
                                           1.00
                                                   79
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                   C 0.90 0.25 1.00 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 169.50 SUBAREA RUNOFF(CFS) = 287.58
 EFFECTIVE AREA(ACRES) = 474.00 AREA-AVERAGED Fm(INCH/HR) = 0.23
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.90
 TOTAL AREA(ACRES) = 474.00 PEAK FLOW RATE(CFS) = 982.16
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
 FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 32.25
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.134
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                    Fρ
                                            Ap
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "WOODLAND"
                      C
                            8 30
                                     0.25
                                            1.00
                                                   73
 NATURAL FAIR COVER
 "GRASS"
                      D
                            6.50
                                     0.20
                                            1.00
                                                   8.4
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            21.60
                                     0.20
                                            1.00
                                                   8.3
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"
                            3.50
                                     0.20
                                             0.20
                                                   7.5
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                            2.10
                                            1.00 84
                     D
                                     0.20
 RESIDENTIAL.
 "3-4 DWELLINGS/ACRE"
                                    0.20
                     D
                           5 50
                                          0.60 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA(ACRES) = 47.50
                           SUBAREA RUNOFF(CFS) = 83.22
 EFFECTIVE AREA(ACRES) = 521.50 AREA-AVERAGED Fm(INCH/HR) = 0.23
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.90
 TOTAL AREA(ACRES) = 521.50 PEAK FLOW RATE(CFS) = 982.16
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
```

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*******************
FLOW PROCESS FROM NODE 809.00 TO NODE 826.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE To (MIN) = 32.25
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.134
SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                 Aр
   LAND USE
               GROUP (ACRES) (INCH/HR) (DECIMAL) CN
NATURAL FAIR COVER
 "WOODLAND"
                D
                     19.00 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) = 19.00 SUBAREA RUNOFF(CFS) = 33.08
EFFECTIVE AREA(ACRES) = 540.50 AREA-AVERAGED Fm(INCH/HR) = 0.23
AREA-AVERAGED Fp (INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.91
TOTAL AREA(ACRES) = 540.50 PEAK FLOW RATE(CFS) =
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****************
FLOW PROCESS FROM NODE 826.00 TO NODE 826.00 IS CODE = 10
______
>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<
______
FLOW PROCESS FROM NODE 3157.00 TO NODE 3157.00 IS CODE = 15.1
______
>>>>DEFINE MEMORY BANK # 2 <<<<<
_____
PEAK FLOWRATE TABLE FILE NAME: CP31100H.DNA
MEMORY BANK # 2 DEFINED AS FOLLOWS:
 STREAM Q Tc Fp(Fm) Ap Ae HEADWATER
 NUMBER (CFS) (MIN.) (INCH/HR) (ACRES) NODE
  1 3956.55 44.39 0.26(0.25) 0.97 2874.7 3120.00
  2 3698.90 50.26 0.26(0.25) 0.97 2943.7 3100.00
 TOTAL AREA(ACRES) = 2943.70
LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3157.00 = 29599.00 FEET.
******************
FLOW PROCESS FROM NODE 3157.00 TO NODE 3157.00 IS CODE = 14.0
______
>>>>MEMORY BANK # 2 COPIED ONTO MAIN-STREAM MEMORY<
_____
MAIN-STREAM MEMORY DEFINED AS FOLLOWS:
 STREAM Q Tc Fp(Fm) Ap Ae HEADWATER
 NUMBER (CFS) (MIN.) (INCH/HR) (ACRES) NODE
  1 3956.55 44.39 0.26(0.25) 0.97 2874.7 3120.00
   2 3698.90 50.26 0.26(0.25) 0.97 2943.7 3100.00
 TOTAL AREA(ACRES) = 2943.70
LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 3157.00 = 29599.00 FEET.
*****
FLOW PROCESS FROM NODE 3157.00 TO NODE 3157.00 IS CODE = 12
______
>>>>CLEAR MEMORY BANK # 2 <<<<<
______
FLOW PROCESS FROM NODE 3157.00 TO NODE 820.00 IS CODE = 51
.....
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
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ELEVATION DATA: UPSTREAM(FEET) = 352.00 DOWNSTREAM(FEET) = 310.0 CHANNEL LENGTH THRU SUBAREA(FEET) = 2262.00 CHANNEL SLOPE = 0.0186
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 3956.55
 FLOW VELOCITY (FEET/SEC.) = 15.60 FLOW DEPTH (FEET) = 7.75
 TRAVEL TIME (MIN.) = 2.42 Tc (MIN.) = 46.80
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 820.00 = 31861.00 FEET.
***********
 FLOW PROCESS FROM NODE 3157.00 TO NODE 820.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE TC (MIN) = 46.80
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.724
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                       Fρ
                                               Ap
     LAND USE
                      GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                               0.20
                                        0.30
                                                1.00
                                                       86
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                              0.40
                                        0.30
                                                1.00
                       В
                                                       6.3
 NATURAL FAIR COVER
 "GRASS"
                              30.40
                                        0.30
                        B
                                                1 00
                                                       69
 URBAN FAIR COVER
                        B
                               7 80
                                        0.30
                                                1.00
                                                       65
 AGRICULTURAL POOR COVER
 "FALLOW"
                              0.60
                                        0.25
                                                1.00
                                                       91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                     С
                            18.30
                                     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) = 57.70
                             SUBAREA RUNOFF(CFS) = 74.78
 EFFECTIVE AREA(ACRES) = 2932.37 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 3001.40 PEAK FLOW RATE (CFS) = 3956.55
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
 FLOW PROCESS FROM NODE 3157.00 TO NODE 820.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
-----
 MAINLINE Tc (MIN) = 46.80
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.724
 SUBAREA LOSS RATE DATA(AMC II):
                                                Ap
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                     Fp
                                                      SCS
     LAND USE
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                              19.40
                                                1.00
                                                       79
                        C
                                        0.25
 URBAN FAIR COVER
 "THEF"
                        С
                              0.40
                                        0.25
                                                1.00
                                                       77
 NATURAL FAIR COVER
 "OPEN BRUSH"
                        C
                              36.50
                                        0.25
                                                1.00
                                                       77
 NATURAL FAIR COVER
                             19.60
                                        0.20
                                                1.00
 "GRASS"
                        D
                                                       84
 URBAN FAIR COVER
 "TURF"
                              1.00
                                        0.20
                        D
                                                1 00 82
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                     D
                            18.40
                                      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) = 95.30
                              SUBAREA RUNOFF(CFS) = 128.14
 EFFECTIVE AREA(ACRES) = 3027.67 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA (ACRES) = 3096.70 PEAK FLOW RATE (CFS) = 4015.63
```

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*******************
 FLOW PROCESS FROM NODE 820.00 TO NODE 821.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 310.00 DOWNSTREAM(FEET) = 300.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 754.00 CHANNEL SLOPE = 0.0133
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4015.63
 FLOW VELOCITY (FEET/SEC.) = 13.91 FLOW DEPTH (FEET) = 8.60
 TRAVEL TIME (MIN.) = 0.90 Tc (MIN.) = 47.71
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 821.00 = 32615.00 FEET.
FLOW PROCESS FROM NODE 820.00 TO NODE 821.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 47.71
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.703
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                Fρ
                                              SCS
                                       αA
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                          30.70
                                  0.30
                                         1.00
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                          0.40
                                  0.30
                                         1.00
                                               6.5
 URBAN FAIR COVER
 "TURF"
                          15 80
                                  0.30
                                               65
                                         1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          0.20
                                  0.30
                                         1 00
                                               69
 NATURAL FAIR COVER
 "GRASS"
                                0.25
                         0.40
                                       1 00
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" D 53.00 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) = 100.50 SUBAREA RUNOFF (CFS) = 131.67
 EFFECTIVE AREA(ACRES) = 3128.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 3197.20
                        PEAK FLOW RATE(CFS) = 4090.66
FLOW PROCESS FROM NODE 820.00 TO NODE 821.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 47.71
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.703
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                 Fp
                                         Αp
                                              SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                    D
                          4 10
                                  0.20
                                         0.50
                                               75
 NATURAL FAIR COVER
 "GRASS"
                          60.70
                                  0.20
                    D
                                         1 00
                                               84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                          0.70
                                  0.20
                    D
                                         1.00
                                               82
 URBAN FAIR COVER
 "TURF"
                           2.70
                                  0.20
                                         1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           2.50
                                  0.20
                                         1.00
                                               8.3
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           6.20
                                  0.20
                                         1.00
                                               84
```

```
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.97
 SUBAREA AREA(ACRES) = 76.90 SUBAREA RUNOFF(CFS) = 104.37
 EFFECTIVE AREA(ACRES) = 3205.07 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 3274.10 PEAK FLOW RATE(CFS) = 4195.03
FLOW PROCESS FROM NODE 820.00 TO NODE 821.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 47.71
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.703
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 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) = 0.27
 EFFECTIVE AREA(ACRES) = 3205.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 3274.30 PEAK FLOW RATE(CFS) = 4195.30
FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 51
._____
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 300.00 DOWNSTREAM(FEET) = 270.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1631.00 CHANNEL SLOPE = 0.0184
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4195.30
 FLOW VELOCITY (FEET/SEC.) = 15.82 FLOW DEPTH (FEET) = 8.03
 TRAVEL TIME (MIN.) = 1.72 Tc (MIN.) = 49.42
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 822.00 = 34246.00 FEET.
*****
 FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 49.42
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.663
 SUBAREA LOSS RATE DATA(AMC II):
                                       Ap SCS
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                          9.40
                                  0.30
                                         1.00 86
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.40
                                  0.30
                                         1.00
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                          0.80
                                  0.30
                                         0.50
                    B
                                              56
 NATURAL FAIR COVER
 "GRASS"
                    B
                          5 60
                                  0.30
                                         1 00 69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                         5.60
                               0.30
                                       1.00 65
                    В
 NATURAL FAIR COVER
                    В
                         0.90
                                0.30 1.00 66
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 22.70 SUBAREA RUNOFF(CFS) = 27.96
 EFFECTIVE AREA(ACRES) = 3227.97 AREA-AVERAGED Fm(INCH/HR) = 0.25
```

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AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97 TOTAL AREA(ACRES) = 3297.00 PEAK FLOW RATE(CFS) = 4195.30
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
.....
FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 49.42
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.663
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                           4.30
                                   0.25
                                          1.00
                                                91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           20.20
                                   0.25
                                          1.00
                                                75
 NATURAL FAIR COVER
 "GRASS"
                           18.70
                                   0.25
                                          1.00
                                                79
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                     C
                           0.70
                                   0.25
                                          1.00 77
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          41.60 0.25 1.00 77
                     C
 AGRICULTURAL POOR COVER
                        1.70 0.20 1.00 94
 "FALLOW"
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 87.20 SUBAREA RUNOFF(CFS) = 110.99
 EFFECTIVE AREA(ACRES) = 3315.17 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 3384.20 PEAK FLOW RATE(CFS) = 4220.21
******************
 FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 49.42
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.663
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                        Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                           1 30
                                   0.20
                                          1.00
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                           3.00
                                   0.20
                                          0.50
                                                75
 NATURAL FAIR COVER
 "GRASS"
                     D
                           4.50
                                   0.20
                                          1.00
                                                84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                     D
                           0.20
                                   0.20
                                          1.00
                                                82
 URBAN FAIR COVER
 "TURF"
                           0.10 0.20 1.00
 NATURAL FAIR COVER
                    D
                          5.00 0.20 1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA(ACRES) = 14.10 SUBAREA RUNOFF(CFS) = 18.84
 EFFECTIVE AREA(ACRES) = 3329.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
TOTAL AREA (ACRES) = 3398.30 PEAK FLOW RATE (CFS) = 4239.05
******************
FLOW PROCESS FROM NODE 821.00 TO NODE 822.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
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MAINLINE Tc (MIN) = 49.42
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.663
 SUBAREA LOSS RATE DATA (AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
                                            Ap
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 NATURAL FAIR COVER
                             4.00
                                     0.20
                                           1.00 79
 "WOODLAND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 4.00 SUBAREA RUNOFF(CFS) = 5.27
 EFFECTIVE AREA(ACRES) = 3333.27 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp (INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 3402.30
                          PEAK FLOW RATE (CFS) = 4244.31
*******************
 FLOW PROCESS FROM NODE 822.00 TO NODE 823.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 270.00 DOWNSTREAM(FEET) = 255.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1203.00 CHANNEL SLOPE = 0.0125
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4244.31
 FLOW VELOCITY (FEET/SEC.) = 13.82 FLOW DEPTH (FEET) = 9.03
 TRAVEL TIME (MIN.) = 1.45 Tc (MIN.) = 50.88
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 823.00 = 35449.00 FEET.
************************
 FLOW PROCESS FROM NODE 822.00 TO NODE 823.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 50.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.636
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                 SCS SOIL AREA
    LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
                            1.00
 "FAT.T.OW"
                                   0.30
                                             1 00 86
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                      B
                          29.50
                                   0.30
                                             0.50
                                                   56
 NATURAL FAIR COVER
 "GRASS"
                            8.70
                                    0.30
                                             1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            1.60
                                   0.30
                                             1.00
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                             8.50
                                   0.30
                                             1.00 69
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                            0.50
                                    0.30
                     В
                                             0.60 56
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.70
 SUBAREA AREA(ACRES) = 49.80
                          SUBAREA RUNOFF (CFS) = 63.92
 EFFECTIVE AREA(ACRES) = 3383.07 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.26 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 3452.10
                            PEAK FLOW RATE (CFS) = 4244.31
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
 FLOW PROCESS FROM NODE 822.00 TO NODE 823.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 50.88
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.636
 SUBAREA LOSS RATE DATA(AMC II):
```

	SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	
NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"	С	4.10	0.25	1.00	75	
NATURAL FAIR COVER "GRASS"	С	13.20	0.25	1.00	79	
NATURAL FAIR COVER "OPEN BRUSH"		17.40	0.25	1.00	77	
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	С	1.30	0.25	1.00	79	
RESIDENTIAL "3-4 DWELLINGS/ACRE"	C	7.50	0.25	0.60	69	
NATURAL FAIR COVER "WOODLAND"	С	2.70	0.25	1.00	73	
SUBAREA AVERAGE PERVIOUS	S LOSS RAT	TE. Fo(INC	H/HR) = 0	25		
		_				
SUBAREA AVERAGE PERVIOUS						
SUBAREA AREA(ACRES) =	46.20	SUBARE	RUNOFF (CF:	3) = 58.3	30	
EFFECTIVE AREA(ACRES) =	3429.27	7 AREA-A	VERAGED Fm	(INCH/HR) :	= 0.25	
AREA-AVERAGED Fp(INCH/H	R) = 0.26	S AREA-AL	ERAGED An :	= 0.97		
TOTAL AREA(ACRES) = 3	100 30	סבאע נ	יז רשו בארדיר	701 - 4	291 70	
IUIAL AREA (ACRES) - 3	490.30	PLAN I	LOW RAIL (C.	3) - 4.	204.79	
******	*****	*******	****	*****	*****	
FLOW PROCESS FROM NODE	822.00	TO NODE	823.00 I	S CODE =	31	
>>>>ADDITION OF SUBAREA						
MAINLINE Tc (MIN) = $50.3$	88					
* 100 YEAR RAINFALL INT	ENSITY (INC	CH/HR) =	1.636			
SUBAREA LOSS RATE DATA(						
DODANGA BODD NATE DATA(	acc cort	3.003		2 .	222	
DEVELOPMENT TYPE/	SCS SOIL	AREA	гр	Ap	SCS	
DEVELOPMENT TYPE/ LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN	
AGRICULTURAL POOR COVER						
		1 40	0.20	1 00	9.1	
	D	1.40	0.20	1.00	94	
RESIDENTIAL						
"5-7 DWELLINGS/ACRE"	D	45.60	0.20	0.50	75	
NATURAL FAIR COVER						
"GRASS"	D	77 10	0.20	1 00	8.4	
	D	77.10	0.20	1.00	0.4	
NATURAL FAIR COVER						
"OPEN BRUSH"			0.20			
AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"						
"PASTURE DRYLAND"	D	10 10	0.20	1 00	8.4	
NATURAL FAIR COVER	D	10.10	0.20	1.00	0 1	
		2 10	0 00	1 00	0.1	
"CHAPARRAL, BROADLEAF"					81	
SUBAREA AVERAGE PERVIOUS	S LOSS RAT	TE, Fp(INC	CH/HR) = 0	.20		
SUBAREA AVERAGE PERVIOU:	S AREA FRA	ACTION, Ar	= 0.84			
SUBAREA AREA(ACRES) =				3) = 182	9.7	
EFFECTIVE AREA(ACRES) =					= 0.24	
AREA-AVERAGED Fp(INCH/H)						
TOTAL AREA(ACRES) = 3	636.70	PEAK E	LOW RATE (C)	FS) = 4	467.76	
	*******			*****	*****	
******						
**************************************	822.00	TO NODE	823.00 I	S CODE =	31	
******	822.00	TO NODE	823.00 I	S CODE =	31	
**************************************	822.00	TO NODE	823.00 I	S CODE =	31	
**************************************	822.00 A TO MAINI	TO NODE	823.00 IS	S CODE = 8	81	
**************************************	822.00 A TO MAINI	TO NODE	823.00 IS	S CODE = 8	81	
**************************************	822.00 A TO MAINI ===================================	TO NODE	823.00 IS	S CODE = 8	81	
**************************************	822.00 A TO MAINI ===================================	TO NODE	823.00 IS	S CODE = 8	81	
*******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE;  MAINLINE Tc (MIN) = 50.:  * 100 YEAR RAINFALL INT	822.00 	TO NODE	823.00 IS	S CODE = 8	81	
**************************************	822.00 A TO MAINI BEBERRALE  88 ENSITY(INC AMC II):	TO NODE LINE PEAK CH/HR) =	823.00 IS FLOW<<<< 1.636	S CODE = {	31	
**************************************	822.00 A TO MAINI BENERAL SERVICE SERV	TO NODE LINE PEAK CH/HR) = AREA	823.00 IS FLOW<<<< 1.636	S CODE = 8	31  scs	
*******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE.  MAINLINE TC(MIN) = 50.:  * 100 YEAR RAINFALL INTI SUBAREA LOSS RATE DATA(I DEVELOPMENT TYPE/ LAND USE	822.00 A TO MAINI BENERAL SERVICE  88 ENSITY(INC AMC II): SCS SOIL	TO NODE LINE PEAK CH/HR) = AREA	823.00 IS FLOW<<<< 1.636	S CODE = 8	31  scs	
**************************************	822.00 A TO MAINI BENERAL SERVICE  88 ENSITY(INC AMC II): SCS SOIL	TO NODE LINE PEAK CH/HR) = AREA	823.00 IS FLOW<<<< 1.636	S CODE = 8	31  scs	
******************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE,  MAINLINE TC (MIN) = 50.0  * 100 YEAR RAINFALL INTI SUBAREA LOSS RATE DATA (ADDEVELOPMENT TYPE/ LAND USE RESIDENTIAL	822.00 A TO MAINI BENSITY (INC AMC II): SCS SOIL GROUP	TO NODE LINE PEAK CH/HR) = AREA (ACRES)	823.00 IS FLOW<<<< 1.636	Ap (DECIMAL)	SCS CN	
*******************  FLOW PROCESS FROM NODE	822.00 A TO MAINI BENSITY (INC AMC II): SCS SOIL GROUP	TO NODE LINE PEAK CH/HR) = AREA (ACRES)	823.00 I: FLOW<<<< 1.636 Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	
********************  FLOW PROCESS FROM NODE	822.00 A TO MAINI 888 ENSITY(INC AMC II): SCS SOIL GROUP	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 32.70	823.00 I: FLOW<<<< 1.636 Fp (INCH/HR) 0.20	Ap (DECIMAL) 0.60	SCS CN	
******************** FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE;  MAINLINE TC (MIN) = 50.; * 100 YEAR RAINFALL INTENTION OF SUBAREA LOSS RATE DATA (INTENTION OF SUBAREA LOSS RATE DATA (INTENTI	822.00 A TO MAINI BENEFITY (INCAMP IN ): SCS SOIL GROUP D D	TO NODE LINE PEAK CH/HR) = AREA (ACRES) 32.70 2.00	823.00 I: FLOW<<<< 1.636 Fp (INCH/HR) 0.20 0.20	Ap (DECIMAL) 0.60 1.00	SCS CN	
******************* FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE.  MAINLINE TC(MIN) = 50.: * 100 YEAR RAINFALL INT! SUBAREA LOSS RATE DATA(: DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "3-4 DWELLINGS/ACRE" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOUS	822.00  A TO MAINI  88  ENSITY(ING AMC II): SCS SOIL GROUP  D  D  S LOSS RAT	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  32.70  2.00  PE, FP(INC	823.00 I: FLOW<<<< 1.636 Fp (INCH/HR) 0.20 0.20 CH/HR) = 0	Ap (DECIMAL) 0.60 1.00	SCS CN	
******************* FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE.  MAINLINE TC(MIN) = 50.: * 100 YEAR RAINFALL INT! SUBAREA LOSS RATE DATA(: DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "3-4 DWELLINGS/ACRE" NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOUS	822.00  A TO MAINI  88  ENSITY(ING AMC II): SCS SOIL GROUP  D  D  S LOSS RAT	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  32.70  2.00  PE, FP(INC	823.00 I: FLOW<<<< 1.636 Fp (INCH/HR) 0.20 0.20 CH/HR) = 0	Ap (DECIMAL) 0.60 1.00	SCS CN	
******************** FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE;  MAINLINE TC (MIN) = 50.; * 100 YEAR RAINFALL INTENTION OF SUBAREA LOSS RATE DATA (INTENTION OF SUBAREA LOSS RATE DATA (INTENTI	822.00  A TO MAINI  88  ENSITY(ING AMC II): SCS SOIL GROUP  D  D  S LOSS RAI S AREA FRA	TO NODE  LINE PEAK  CH/HR) =  AREA (ACRES)  32.70  2.00  TE, FP(ING ACTION, AF	823.00 I: FLOW<<<< 1.636 Fp (INCH/HR) 0.20 0.20 CH/HR) = 0	Ap (DECIMAL) 0.60 1.00	SCS CN 75	

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EFFECTIVE AREA(ACRES) = 3602.37 AREA-AVERAGED Fm(INCH/HR) = 0.24 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 3671.40
                           PEAK FLOW RATE(CFS) = 4514.96
+++++
 FLOW PROCESS FROM NODE 823.00 TO NODE 824.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 255.00 DOWNSTREAM(FEET) = 235.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1331.00 CHANNEL SLOPE = 0.0150
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4514.96
 FLOW VELOCITY (FEET/SEC.) = 15.03 FLOW DEPTH (FEET) = 8.87
 TRAVEL TIME (MIN.) = 1.48 Tc (MIN.) = 52.35
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 824.00 = 36780.00 FEET.
******************
 FLOW PROCESS FROM NODE 823.00 TO NODE 824.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
______
 MAINLINE To (MIN) = 52.35
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.612
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                   Fp
                                           Αp
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                            2.50
                                    0.30
                                            1 00
                                                  86
 NATURAL FAIR COVER
 "GRASS"
                           10.30
                                    0.30
                                            1.00
                                                  69
                      В
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.60
                                    0.30
                                            1.00
                      В
                                                  66
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           3.90
                                    0.30
                                            1.00
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                      B
                         15.30
                                    0.30
                                            0.60 56
 NATURAL FAIR COVER
 "WOODT.AND"
                     B
                            0 40
                                    0.30
                                          1.00 60
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.81
 SUBAREA AREA(ACRES) = 33.00
                         SUBAREA RUNOFF(CFS) = 40.63
 EFFECTIVE AREA(ACRES) = 3635.37 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 3704.40
                           PEAK FLOW RATE(CFS) = 4514.96
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
 FLOW PROCESS FROM NODE 823.00 TO NODE 824.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 52.35
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.612
 SUBAREA LOSS RATE DATA(AMC II):
                                  Fp
 DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                            Ap
                                                  SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                      C
                             0.20
                                    0.25
                                            1.00
                                                  91
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                      C
                            0.20
                                    0.25
                                            1.00
 NATURAL FAIR COVER
 "GRASS"
                      С
                             9.90
                                    0.25
                                            1.00
                                                  79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                      С
                                            1.00 77
                            24.60
                                    0.25
```

```
RESIDENTIAL
 '3-4 DWELLINGS/ACRE"
                           63.30
                                0.25
                                        0.60 69
                    C
 NATURAL FAIR COVER
 "WOODLAND"
                    C
                           5.00 0.25 1.00 73
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.75
 SUBAREA AREA(ACRES) = 103.20
                          SUBAREA RUNOFF(CFS) = 132.23
 EFFECTIVE AREA(ACRES) = 3738.57 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 3807.60
                        PEAK FLOW RATE(CFS) = 4611.28
*********************
 FLOW PROCESS FROM NODE 823.00 TO NODE 824.00 IS CODE = 81
._____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 52.35
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.612
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                  Fρ
                                          αA
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                     D
                           1.00
                                   0.20
                                          1.00
                                                94
 NATURAL FAIR COVER
 "GRASS"
                           3 60
                                   0.20
                                          1 00
                     D
                                                84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.50
                                   0.20
                                          1.00
                                                83
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                          23.80
                                  0.20
                                          0.60
                                                75
 NATURAL FAIR COVER
                                        1.00 79
 "WOODT.AND"
                     D
                          2.30
                                 0.20
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.69
 SUBAREA AREA(ACRES) = 31.20 SUBAREA RUNOFF(CFS) = 41.37
 EFFECTIVE AREA(ACRES) = 3769.77 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 3838.80
                        PEAK FLOW RATE (CFS) = 4652.65
*******************
 FLOW PROCESS FROM NODE 824.00 TO NODE 825.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
-----
 ELEVATION DATA: UPSTREAM(FEET) = 235.00 DOWNSTREAM(FEET) = 210.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1566.00 CHANNEL SLOPE = 0.0160
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4652.65
 FLOW VELOCITY (FEET/SEC.) = 15.49 FLOW DEPTH (FEET) = 8.87
 TRAVEL TIME (MIN.) = 1.68 Tc (MIN.) = 54.04
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 825.00 = 38346.00 FEET.
*****
 FLOW PROCESS FROM NODE 824.00 TO NODE 825.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 54.04
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.585
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                 Fρ
                                         Aρ
                                               SCS
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                           0.40
                                   0.40
                                          1.00
                                                49
 AGRICULTURAL POOR COVER
 "FALLOW"
                           6.30
                                   0.30
```

1.00

86

NATURAL FAIR COVER "GRASS" B 24.60 0.30 1.00 69	
NATURAL FAIR COVER	
"OPEN BRUSH" B 0.40 0.30 1.00 66	
AGRICULTURAL FAIR COVER "PASTURE,DRYLAND" B 2.50 0.30 1.00 69	
"PASTURE, DRYLAND" B 2.50 0.30 1.00 69 RESIDENTIAL	
"3-4 DWELLINGS/ACRE" B 0.90 0.30 0.60 56	
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30	
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99	
SUBAREA AREA(ACRES) = 35.10 SUBAREA RUNOFF(CFS) = 40.67 EFFECTIVE AREA(ACRES) = 3804.87 AREA-AVERAGED Fm(INCH/HR) = 0.24	
AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.95	
TOTAL AREA (ACRES) = 3873.90 PEAK FLOW RATE (CFS) = 4652.65	
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE	
*******************	
FLOW PROCESS FROM NODE 824.00 TO NODE 825.00 IS CODE = 81	
ANNARDATION OF GURARES TO MATHEMATIC PROPERTY BY ONLY AND	
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<	
MAINLINE Tc(MIN) = 54.04	
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.585	
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 0.50 0.30 1.00 60	
AGRICULTURAL POOR COVER "FALLOW" C 2.00 0.25 1.00 91	
"FALLOW" C 2.00 0.25 1.00 91 NATURAL FAIR COVER	
"GRASS" C 25.50 0.25 1.00 79	
NATURAL FAIR COVER "OPEN BRUSH" C 4.80 0.25 1.00 77	
RESIDENTIAL	
"3-4 DWELLINGS/ACRE" C 24.20 0.25 0.60 69	
"3-4 DWELLINGS/ACRE" C 24.20 0.25 0.60 69 AGRICULTURAL POOR COVER "FALLOW" D 0.70 0.20 1.00 94 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25	
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25	
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.83	
SUBAREA AREA(ACRES) = 57.70 SUBAREA RUNOFF(CFS) = 71.53	
SUBAREA AREA(ACRES) = 57.70 SUBAREA RUNOFF(CFS) = 71.53 EFFECTIVE AREA(ACRES) = 3862.57 AREA-AVERAGED Fm(INCH/HR) = 0.24 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.95	
TOTAL AREA(ACRES) = 3931.60 PEAK FLOW RATE(CFS) = 4673.39	
**************************************	
FLOW PROCESS FROM NODE 824.00 TO NODE 825.00 IS CODE = 81	
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<	
MAINLINE Tc(MIN) = 54.04 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.585	
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 14.00 0.20 1.00 84	
RESIDENTIAL	
"3-4 DWELLINGS/ACRE" D 39.90 0.20 0.60 75	
NATURAL FAIR COVER "WOODLAND" D 3.50 0.20 1.00 79	
"WOODLAND" D 3.50 0.20 1.00 79 AGRICULTURAL FAIR COVER	
"PASTURE, DRYLAND" D 0.70 0.20 1.00 84	
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20	
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.73 SUBAREA AREA(ACRES) = 58.10 SUBAREA RUNOFF(CFS) = 75.32	
EFFECTIVE AREA (ACRES) = 58.10 SUBAREA RUNOFF (CFS) = 75.32 EFFECTIVE AREA (ACRES) = 3920.67 AREA-AVERAGED Fm (INCH/HR) = 0.24	

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AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.95 TOTAL AREA(ACRES) = 3989.70 PEAK FLOW RATE(CFS) =
***********************
FLOW PROCESS FROM NODE 825.00 TO NODE 826.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 210.00 DOWNSTREAM(FEET) = 176.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 2723.00 CHANNEL SLOPE = 0.0125
 CHANNEL BASE (FEET) = 25.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 10.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4748.70
 FLOW VELOCITY (FEET/SEC.) = 14.28 FLOW DEPTH (FEET) = 9.61
 TRAVEL TIME (MIN.) = 3.18 Tc (MIN.) = 57.22
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 826.00 = 41069.00 FEET.
******************
 FLOW PROCESS FROM NODE 825.00 TO NODE 826.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 57.22
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.535
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                 SCS SOIL AREA
                                   Fρ
                                         αA
                                                SCS
     LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
                                            1.00 77
 "FALLOW"
                            0.20
                                    0.40
 NATURAL FAIR COVER
 "GRASS"
                            0.40
                                    0.40
                                           1.00
                                                  5.0
 NATURAL FAIR COVER
 "OPEN BRUSH"
                            0.90
                                           1.00 46
                                  0.40
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                            0.60 0.40
                                          1.00 49
 NATURAL FAIR COVER
 "WOODLAND"
                     A 0.60 0.40
                                         1.00 36
 AGRICULTURAL POOR COVER
                           3.60
 "FALLOW"
                     В
                                  0.30 1.00 86
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.34
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 6.30
                         SUBAREA RUNOFF(CFS) = 6.76
 EFFECTIVE AREA(ACRES) = 3926.97 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 3996.00
                            PEAK FLOW RATE (CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
 FLOW PROCESS FROM NODE 825.00 TO NODE 826.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 57.22
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.535
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                   Fp
                                          Aр
                                                 SCS
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                      B
                            0.90
                                    0.30
                                           1.00
                                                  69
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                            0.20
                                   0.30
                                           1.00 69
 NATURAL FAIR COVER
 "WOODLAND"
                            0.40
                                  0.30
                                           1.00
                                                  60
 AGRICULTURAL POOR COVER
 "FALLOW"
                           11.60
                                  0.25
                                          1.00 91
 NATURAL FAIR COVER
```

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19.50
 "GRASS"
                                      0.25
                                              1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     C
                           16.60 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) = 49.20 SUBAREA RUNOFF(CFS) = 56.81
 EFFECTIVE AREA(ACRES) = 3976.17 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.95
 TOTAL AREA(ACRES) = 4045.20 PEAK FLOW RATE(CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****
 FLOW PROCESS FROM NODE 825.00 TO NODE 826.00 IS CODE = 81
._____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 57.22
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.535
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                    Fρ
                                            Ap SCS
    LAND USE
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                             1.00
                                      0.25
                                              1.00 73
 "WOODT AND"
                       C
 AGRICULTURAL POOR COVER
                             2.50
 "FAT.T.OW"
                                    0.20
                                             1 00 94
                       D
 NATURAL FAIR COVER
                             4.50
 "GRASS"
                       D
                                    0.20
                                              1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                       D 6.40
                                    0.20
                                            1.00 83
 NATURAL FAIR COVER
                                    0.20 1.00 79
 "MOODI.AND"
                            2.90
                      D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 17.30
                          SUBAREA RUNOFF(CFS) = 20.73
 EFFECTIVE AREA(ACRES) = 3993.47 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 0.95
 TOTAL AREA (ACRES) = 4062.50 PEAK FLOW RATE (CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
 FLOW PROCESS FROM NODE 826.00 TO NODE 826.00 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.) = 16.0%; VALLEY(UNDEV.)/DESERT= 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.06; LAG(HR) = 0.84; Fm(INCH/HR) = 0.24; Ybar = 0.43
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.82; 30M = 0.82; 1HR = 0.82;
 3HR = 0.97; 6HR = 0.99; 24HR = 0.99
 UNIT-INTERVAL (MIN) = 5.00 TOTAL AREA (ACRES) = 4062.50
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 826.00 = 41069.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243; Lca/L=0.6,n=.0227
 TIME OF PEAK FLOW(HR) = 16.58 RUNOFF VOLUME(AF) = 1188.57
 UNIT-HYDROGRAPH METHOD PEAK FLOW RATE(CFS) = 3368.48
 TOTAL PEAK FLOW RATE(CFS) = 3368.48 (SOURCE FLOW INCLUDED)
 RATIONAL METHOD PEAK FLOW RATE (CFS) = 4748.70
  (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4748.70)
 PEAK FLOW RATE (CFS) USED = 4748.70
 FLOW PROCESS FROM NODE 826.00 TO NODE 826.00 IS CODE = 11
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>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<
______
 ** MAIN STREAM CONFLUENCE DATA **
 PEAK FLOW RATE (CFS) = 4748.70 Tc (MIN.) = 63.30
 AREA-AVERAGED Fm (INCH/HR) = 0.24 Ybar = 0.43
 TOTAL AREA(ACRES) = 4062.50
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 826.00 = 41069.00 FEET.
 ** MEMORY BANK # 1 CONFLUENCE DATA **
 STREAM Q TC Intensity Fp(Fm) Ap Ae HEADWATER NUMBER (CFS) (MIN.) (INCH/HR) (INCH/HR) (ACRES) NODE
  1 982.16 32.25 2.134 0.25(0.23) 0.91 540.5 800.00
 LONGEST FLOWPATH FROM NODE 800.00 TO NODE 826.00 = 9684.00 FEET.
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 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.) = 16.0%; VALLEY(UNDEV.)/DESERT= 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.06; LAG(HR) = 0.84; Fm(INCH/HR) = 0.24; Ybar = 0.43
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL (MIN) = 5.00 TOTAL AREA (ACRES) = 4603.00
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 826.00 = 41069.00 FEET.
 EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0295; Lca/L=0.4,n=.0265; Lca/L=0.5,n=.0243; Lca/L=0.6,n=.0227
 TIME OF PEAK FLOW(HR) = 16.58 RUNOFF VOLUME(AF) = 1341.89
 PEAK FLOW RATE (CFS) = 3728.67
  (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4748.70)
 PEAK FLOW RATE (CFS) USED = 4748.70
******************
FLOW PROCESS FROM NODE 826.00 TO NODE 826.00 IS CODE = 12
>>>>CLEAR MEMORY BANK # 1 <<<<
______
FLOW PROCESS FROM NODE 826.00 TO NODE 848.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 176.00 DOWNSTREAM(FEET) = 175.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 170.00 CHANNEL SLOPE = 0.0059
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4748.70
 FLOW VELOCITY (FEET/SEC.) = 10.15 FLOW DEPTH (FEET) = 4.93
 TRAVEL TIME (MIN.) = 0.28 Tc (MIN.) = 63.58
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 848.00 = 41239.00 FEET.
*******************
 FLOW PROCESS FROM NODE 826.00 TO NODE 848.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 63.58
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.443
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                   SCS SOIL AREA
                                    Fp
                                           Αp
                    GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                                  0.40
                                          1.00 46
                           0.20
 NATURAL FAIR COVER
```

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1.00 36
 "WOODLAND"
                             0.10
                                    0.40
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D
                           0.30 0.20 1.00 83
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.30
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 0.60
 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.) = 16.0%; VALLEY(UNDEV.) / DESERT = 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT(UNDEV.)= 0.0%
 Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.43
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.80; 30M = 0.80; 1HR = 0.80;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 5.00 TOTAL AREA(ACRES) = 4603.60
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 848.00 = 41239.00 FEET.
 EQUIVALENT BASIN FACTOR APPROXIMATIONS:
 Lca/L=0.3, n=.0295; Lca/L=0.4, n=.0265; Lca/L=0.5, n=.0243; Lca/L=0.6, n=.0227
 TIME OF PEAK FLOW(HR) = 16.58 RUNOFF VOLUME(AF) = 1342.02
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3721.64
 TOTAL AREA (ACRES) = 4603.60 PEAK FLOW RATE (CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
********************
 FLOW PROCESS FROM NODE 848.00 TO NODE 848.00 IS CODE = 1
_____
 >>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE <<<
_____
 TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 PEAK FLOW RATE (CFS) = 4748.70 Tc (MIN.) = 63.58
 AREA-AVERAGED Fm(INCH/HR) = 0.24 Ybar = 0.43
 TOTAL AREA(ACRES) = 4603.60
FLOW PROCESS FROM NODE 830.00 TO NODE 831.00 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) = 895.00 DOWNSTREAM(FEET) = 820.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.606
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.277
 SUBAREA To AND LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fp
                                           Ap SCS Tc
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                           0.10 0.25
                                          1.00 79 9.61
                     C
 NATURAL FAIR COVER
                     С
                           0.30
                                  0.25 1.00 77 9.61
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF(CFS) =
                   1.45
 TOTAL AREA(ACRES) = 0.40 PEAK FLOW RATE(CFS) = 1.45
*******************
 FLOW PROCESS FROM NODE 831.00 TO NODE 832.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
-----
 ELEVATION DATA: UPSTREAM(FEET) = 820.00 DOWNSTREAM(FEET) = 790.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 150.00 CHANNEL SLOPE = 0.2000
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
```

```
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                          1.45
 FLOW VELOCITY (FEET/SEC.) = 5.08 FLOW DEPTH (FEET) = 0.23
 TRAVEL TIME (MIN.) = 0.49 Tc (MIN.) = 10.10
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 832.00 = 477.00 FEET.
*****
FLOW PROCESS FROM NODE 831.00 TO NODE 832.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 10.10
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.140
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                SCS SOIL AREA
                                 Fp Ap
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                          0.50
                                  0.25
                                       1 00 79
 NATURAL FAIR COVER
                    C 0.30 0.25 1.00 77
 "OPEN BRUSH"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA (ACRES) = 0.80 SUBAREA RUNOFF (CFS) = 2.80
 EFFECTIVE AREA(ACRES) = 1.20 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 1.20 PEAK FLOW RATE(CFS) =
*****
 FLOW PROCESS FROM NODE 832.00 TO NODE 833.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 790.00 DOWNSTREAM(FEET) = 762.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 200.00 CHANNEL SLOPE = 0.1400
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                           4.20
 FLOW VELOCITY (FEET/SEC.) = 6.11 FLOW DEPTH (FEET) = 0.47
 TRAVEL TIME (MIN.) = 0.55 Tc (MIN.) = 10.64
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 833.00 = 677.00 FEET.
***********************
 FLOW PROCESS FROM NODE 832.00 TO NODE 833.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 10.64
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.031
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                        Aρ
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                         0.40
                                0.25
                                       1.00 79
 NATURAL FAIR COVER
                        0.80 0.25 1.00 77
 "OPEN BRUSH"
                    С
 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) = 4.08
 EFFECTIVE AREA(ACRES) = 2.40 AREA-AVERAGED Fm(INCH/HR) = 0.25
 AREA-AVERAGED Fp(INCH/HR) = 0.25 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 2.40 PEAK FLOW RATE(CFS) =
******************
 FLOW PROCESS FROM NODE 833.00 TO NODE 834.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
```

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>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 762.00 DOWNSTREAM(FEET) = 754.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 124.00 CHANNEL SLOPE = 0.0645
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                          8.17
 FLOW VELOCITY (FEET/SEC.) = 5.54 FLOW DEPTH (FEET) = 0.81
 TRAVEL TIME (MIN.) = 0.37 Tc (MIN.) = 11.02
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 834.00 = 801.00 FEET.
*****
 FLOW PROCESS FROM NODE 833.00 TO NODE 834.00 IS CODE = 81
._____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
______
 MAINLINE Tc (MIN) = 11.02
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.957
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                               Fp
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                           0.70
                                  0.25
                                         1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C
                         1 10
                                0.25
                                         1 00 77
 NATURAL FAIR COVER
                       0.10
 "GRASS"
                    D
                                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) = 0.24
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 2.30 SUBAREA RUNOFF(CFS) = 7.70
 EFFECTIVE AREA(ACRES) = 4.70 AREA-AVERAGED Fm(INCH/HR) = 0.24
 AREA-AVERAGED Fp(INCH/HR) = 0.24 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 4.70 PEAK FLOW RATE(CFS) = 15.70
*****
 FLOW PROCESS FROM NODE 834.00 TO NODE 835.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <
_____
 ELEVATION DATA: UPSTREAM(FEET) = 754.00 DOWNSTREAM(FEET) = 740.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 550.00 CHANNEL SLOPE = 0.0255
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 15.70
 FLOW VELOCITY (FEET/SEC.) = 4.54 FLOW DEPTH (FEET) = 1.11
 TRAVEL TIME (MIN.) = 2.02 Tc (MIN.) = 13.03
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 835.00 = 1351.00 FEET.
******************
 FLOW PROCESS FROM NODE 834.00 TO NODE 835.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 13.03
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.583
 SUBAREA LOSS RATE DATA(AMC II):
                               Fp
 DEVELOPMENT TYPE/
               SCS SOIL AREA
                                        Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                    C
                          3.30
                                  0.25
                                         1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C
                           0.60
                                  0.25
                                         1.00 77
 NATURAL FAIR COVER
 "GRASS"
                    D
                           6.00
                                  0.20
                                         1.00 84
```

```
NATURAL FAIR COVER
                    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) = 10.50 SUBAREA RUNOFF(CFS) = 31.79
 EFFECTIVE AREA(ACRES) = 15.20 AREA-AVERAGED Fm(INCH/HR) = 0.23
 AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 15.20 PEAK FLOW RATE (CFS) =
*******************
 FLOW PROCESS FROM NODE 835.00 TO NODE 836.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 740.00 DOWNSTREAM(FEET) = 624.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 929.00 CHANNEL SLOPE = 0.1249
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 45.92
 FLOW VELOCITY (FEET/SEC.) = 10.86 FLOW DEPTH (FEET) = 1.29
 TRAVEL TIME (MIN.) = 1.43 Tc (MIN.) = 14.46
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 836.00 = 2280.00 FEET.
******************
FLOW PROCESS FROM NODE 835.00 TO NODE 836.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 14.46
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.378
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                        Ap
                                 Fp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                           0.10
                                  0.25
                                          1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.10
                                  0.25
                                         1.00 77
 AGRICULTURAL POOR COVER
 "FALLOW"
                     D
                           4.50
                                 0.20
                                         1.00 94
 NATURAL FAIR COVER
 "GRASS"
                   D
                          10.40
                                 0.20
                                        1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    D
                           0.40
                                 0.20
                                        1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 15.50 SUBAREA RUNOFF(CFS) = 44.32
 EFFECTIVE AREA(ACRES) = 30.70 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 30.70 PEAK FLOW RATE(CFS) =
********************
 FLOW PROCESS FROM NODE 836.00 TO NODE 837.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 624.00 DOWNSTREAM(FEET) = 592.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 417.00 CHANNEL SLOPE = 0.0767
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 87.43
 FLOW VELOCITY (FEET/SEC.) = 10.58 FLOW DEPTH (FEET) = 1.74
 TRAVEL TIME (MIN.) = 0.66 Tc (MIN.) = 15.12
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 837.00 = 2697.00 FEET.
*******************
```

	836.00	TO NODE	837.00 IS	CODE = 8	31
>>>>ADDITION OF SUBAREA					
MAINLINE Tc (MIN) = 15.1		=======		=======	
* 100 YEAR RAINFALL INTE			3.287		
SUBAREA LOSS RATE DATA(A DEVELOPMENT TYPE/			Fp	Ap	SCS
DEVELOPMENT TYPE/ 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" AGRICULTURAL POOR COVER	С	0.60	0.25	1.00	77
"FALLOW"		2.30	0.20	1.00	94
NATURAL FAIR COVER "GRASS"	D	5 10	0.20	1 00	8.4
NATURAL FAIR COVER	D	3.10	0.20	1.00	04
"OPEN BRUSH"	D	1.10	0.20	1.00	83
NATURAL FAIR COVER "WOODLAND"	D	0.20	0.20	1.00	79
SUBAREA AVERAGE PERVIOUS		TE, Fp(INC	CH/HR) = 0		
SUBAREA AVERAGE PERVIOUS SUBAREA AREA(ACRES) =	9.50	ACTION, Ap	o = 1.00 A RUNOFF(CFS	3) = 26.3	36
EFFECTIVE AREA(ACRES) =	40.2	0 AREA-A	AVERAGED Fm	(INCH/HR) =	= 0.21
AREA-AVERAGED Fp(INCH/HF	(1) = 0.2	1 AREA-AV	/ERAGED Ap =	1.00	
TOTAL AREA(ACRES) =	40.20	PEAK I	FLOW RATE (CI	FS) = 1	111.27
******					
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDAI					
>>>>TRAVELTIME THRU SUE					
ELEVATION DATA: UPSTREAM					
CHANNEL LENGTH THRU SUBA CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO	AREA (FEET 3.00 " 0 MAXIM CA (CFS) = = 6.4 16 Tc (1	) = 60. Z" FACTOR UM DEPTH(F	.00 CHANNE = 1.000 FEET) = 3.7 DEPTH(FEET) L5.27	EL SLOPE = .00 = 2.93	0.0167
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0.	AREA (FEET 3.00 " 3.00 " MAXIM GA (CFS) = 6.4 16 Tc (1.00	) = 60. Z" FACTOR UM DEPTH(I 111.2 0 FLOW I MIN.) = 1 0.00 TO NO	.00 CHANNE = 1.000 FEET) = 3.7 DEPTH (FEET) L5.27 DDE 838.0	EL SLOPE = .00 = 2.93 .00 = 2757.	0.0167 .00 FEET.
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04C CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NC ************************************	AREA (FEET 3.00 " MAXIM CA (CFS) = 6.4 16 Tc (CO) MAXIM SA (CFS) = 6.4 16 Tc (CFS) (CFS) = 6.4 16	) = 60. Z" FACTOR UM DEPTH(I 111.2 0 FLOW I MIN.) = 1 0.00 TO NO ********** TO NODE	.00 CHANNE = 1.000 FEET) = 3.7 DEPTH (FEET) L5.27 DDE 838.0	EL SLOPE = .000 = 2.93	0.0167 .00 FEET. ***********
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO	AREA (FEET 3.00 " MAXIM (A (CFS) = 6.4 16 Tc (10)	) = 60. Z" FACTOR UM DEPTH(I	.00 CHANNE = 1.000 FEET) = 3.7 DEPTH (FEET) L5.27 DDE 838.0	EL SLOPE = .000 = 2.93	0.0167 .00 FEET. ***********
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04C CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NC ************************************	REA (FEET 3.00 " )  MAXIM A (CFS) = 6.4 16 Tc () DE 83  ******* 837.00 TO MAIN NSITY (IN	) = 60. Z" FACTOR UM DEPTH(H 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO ************************************	.00 CHANNE = 1.000 FEET) = 3.7 DEPTH(FEET) 15.27 DDE 838.0 ************************************	00 = 2.93 00 = 2757. ***********************************	0.0167 .00 FEET. ************
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04C CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NC  ***********************************	REA(FEET 3.00 " )  MAXIM CA(CFS) = 6.4 16 Tc() DE 83  *******  *******  ********  ********	) = 60. Z" FACTOR UM DEPTH(I 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO ********* TO NODE	.00 CHANNE = 1.000 FEET) = 3.7 DEPTH(FEET) 15.27 DDE 838.0 ************************************	EL SLOPE = 00 = 2.93   00 = 2757.	0.0167 .00 FEET. ************ 81
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04C CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  **************************** FLOW PROCESS FROM NODE	REA (FEET 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 "	) = 60. Z" FACTOR UM DEPTH(H 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO ********* TO NODE	.00 CHANNE = 1.000 FEET) = 3.7 DEPTH(FEET) L5.27 DDE 838.0 ************************************	EL SLOPE =  00  = 2.93  00 = 2757.  *********  ********  ******  CODE = (  Ap (DECIMAL)	0.0167  .00 FEET.  ************  81  SCS CN
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04C CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  ***********************************	REA (FEET 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 "	) = 60. Z" FACTOR UM DEPTH(H 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO ********* TO NODE	.00 CHANNE 1.000 FEET) = 3.77 DEPTH(FEET) .5.27 DDE 838.0 ************************************	EL SLOPE =  00  = 2.93  00 = 2757.  *********  ********  ******  CODE = (  Ap (DECIMAL)	0.0167  .00 FEET.  ************  81  SCS CN
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  ***********************************	REA (FEET 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 " 3.00 "	) = 60. Z" FACTOR UM DEPTH(H 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO ******** TO NODE	.00 CHANNE = 1.000 FEET) = 3.7 DEPTH(FEET) L5.27 DDE 838.0 ************************************	EL SLOPE =  00  = 2.93  00 = 2757.  *********  ********  ******  CODE = (  Ap (DECIMAL)	0.0167  .00 FEET.  ************  81  SCS CN
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04C CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  ***************************** FLOW PROCESS FROM NODE	REA(FEET 3.00 " )  MAXIM (A(CFS) = 6.4 16 Tc() DE 83 ******** 837.00 ***********************************	) = 60. Z" FACTOR UM DEPTH(I 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO ********** TO NODE	.00 CHANNE 1.000 FEET) = 3.7 DEPTH(FEET)   5.27 DDE 838.0 ************************************	EL SLOPE = 000 = 2.93	0.0167  .00 FEET.  ************  31   SCS CN 75 79
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  ***********************************	REA(FEET 3.00 " 3.00 " MAXIM CA(CFS) = 6.4 16 Tc() DDE 83 ******* 837.00 TO MAIN ENCE II : SCS SOIL GROUP C C C	) = 60. Z" FACTOR UM DEPTH(I 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO  ********** TO NODE	.00 CHANNE 1.000 FEET) 3.7 DEPTH(FEET) 5.27 DDE 838.0 ************** 838.00 IS	Ap (DECIMAL)  1.00  1.00	0.0167  .00 FEET.  ************  31  SCS CN 75 79 77
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  ***********************************	REA(FEET 3.00 " )  MAXIM (A(CFS) = 6.4 16 Tc() DE 83 ******** 837.00 ***********************************	) = 60. Z" FACTOR UM DEPTH(I 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO ********** TO NODE	.00 CHANNE 1.000 FEET) 3.7 DEPTH(FEET) 5.27 DDE 838.0 ************* 838.00 IS	Ap (DECIMAL)  1.00  1.00	0.0167  .00 FEET.  ************  31   SCS CN 75 79
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04C CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  ***************************** FLOW PROCESS FROM NODE	REA(FEET 3.00 " 3.00 " MAXIM CA(CFS) = 6.4 16 Tc() DDE 83 ******* 837.00 TO MAIN ENCE II : SCS SOIL GROUP C C C	) = 60. Z" FACTOR UM DEPTH(I 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO  ********** TO NODE	.00 CHANNE 1.000 FEET) 3.7 DEPTH(FEET) 5.27 DDE 838.0 ************** 838.00 IS	Ap (DECIMAL)  1.00  1.00  1.00	0.0167  .00 FEET.  ************  31  SCS CN 75 79 77
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.040 CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  ******************************** FLOW PROCESS FROM NODE	REA(FEET 3.00 " 3.00 " 3.00 " 4.00 " 3.00 " 4.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 " 5.00 "	) = 60. Z" FACTOR UM DEPTH(I 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO  ********** TO NODE	.00 CHANNE 1.000 FEET) 3.7 DEPTH(FEET) 5.27 DDE 838.0 ************* 838.00 IS	Ap (DECIMAL)  1.00  1.00  1.00  1.00	0.0167  .00 FEET.  *************  31  SCS CN 75 79 77 81 84
CHANNEL BASE (FEET) = MANNING'S FACTOR = 0.04C CHANNEL FLOW THRU SUBARE FLOW VELOCITY (FEET/SEC.) TRAVEL TIME (MIN.) = 0. LONGEST FLOWPATH FROM NO  ***************************** FLOW PROCESS FROM NODE	REA (FEET 3.00 " )  MAXIM (CFS) = 6.4 16 Tc() DE 83 ********* 837.00	) = 60. Z" FACTOR Z" FACTOR UM DEPTH(I 111.2' 0 FLOW I MIN.) = 1 0.00 TO NO  ********** TO NODE	.00 CHANNE 1.000 FEET) 3.7 DEPTH(FEET) 838.0  ************* 838.00 IS	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00	0.0167  .00 FEET.  *************  31   SCS CN 75 79 77 81

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SUBAREA AREA(ACRES) = 18.10 SUBAREA RUNOFF(CFS) = 49.62 EFFECTIVE AREA(ACRES) = 58.30 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 58.30 PEAK FLOW RATE(CFS) =
FLOW PROCESS FROM NODE 837.00 TO NODE 838.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 15.27
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.269
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp Ap
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                                0.20 1.00 79
 "WOODLAND"
                    D
                         0.20
 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) = 0.55
 EFFECTIVE AREA(ACRES) = 58.50 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 58.50 PEAK FLOW RATE(CFS) = 160.82
******************
 FLOW PROCESS FROM NODE 838.00 TO NODE 839.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 591.00 DOWNSTREAM(FEET) = 526.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 973.00 CHANNEL SLOPE = 0.0668
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 160.82
 FLOW VELOCITY (FEET/SEC.) = 11.80 FLOW DEPTH (FEET) = 2.48
 TRAVEL TIME (MIN.) = 1.37 Tc (MIN.) = 16.65
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 839.00 = 3730.00 FEET.
******************
 FLOW PROCESS FROM NODE 838.00 TO NODE 839.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
.______
 MAINLINE Tc (MIN) = 16.65
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.116
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                         3.00 0.20
                                       1.00 94
 NATURAL FAIR COVER
 "GRASS"
                         16.40 0.20 1.00 84
 NATURAL FAIR COVER
                    D
                         0.60 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) = 20.00 SUBAREA RUNOFF(CFS) = 52.48
 EFFECTIVE AREA(ACRES) = 78.50 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 78.50 PEAK FLOW RATE(CFS) = 205.19
*************************
 FLOW PROCESS FROM NODE 839.00 TO NODE 840.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
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______
 ELEVATION DATA: UPSTREAM(FEET) = 526.00 DOWNSTREAM(FEET) = 455.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1045.00 CHANNEL SLOPE = 0.0679
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 205.19
 FLOW VELOCITY (FEET/SEC.) = 12.62 FLOW DEPTH (FEET) = 2.80
 TRAVEL TIME (MIN.) = 1.38 Tc (MIN.) = 18.03
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 840.00 = 4775.00 FEET.
********************
 FLOW PROCESS FROM NODE 839.00 TO NODE 840.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 18.03
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.974
 SUBAREA LOSS RATE DATA(AMC II):
                                      Ap
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                         1.00
                                 0.25
                                        1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   C
                         0.50
                                 0.25
                                       1.00 77
 NATURAL FAIR COVER
 "GRASS"
                   D 31.60
                                 0.20
                                       1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         1.60
                               0.20
                                      1.00 83
                  D
 NATURAL FAIR COVER
                               0.20 1.00 79
 "WOODLAND"
                   D
                        0.40
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 35.10 SUBAREA RUNOFF(CFS) = 87.55
 EFFECTIVE AREA(ACRES) = 113.60 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 113.60
                         PEAK FLOW RATE (CFS) = 282.71
FLOW PROCESS FROM NODE 840.00 TO NODE 841.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 455.00 DOWNSTREAM(FEET) = 409.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 675.00 CHANNEL SLOPE = 0.0681
 CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 282.71
 FLOW VELOCITY (FEET/SEC.) = 13.65 FLOW DEPTH (FEET) = 2.97
 TRAVEL TIME (MIN.) = 0.82 Tc (MIN.) = 18.85
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 841.00 = 5450.00 FEET.
FLOW PROCESS FROM NODE 840.00 TO NODE 841.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 18.85
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.901
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
               SCS SOIL AREA
                               Fρ
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                         6.00
                               0.30
                                       1.00 86
 NATURAL FAIR COVER
                   B 7.40 0.30
                                      1.00 69
 "GRASS"
 AGRICULTURAL POOR COVER
```

```
0.20
 "FAT.T.OW"
                           4.10
                                          1.00
 NATURAL FAIR COVER
 "GRASS"
                   D 24.80 0.20 1.00 84
 NATURAL FAIR COVER
                    D 0.90 0.20 1.00 79
 "WOODLAND"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 43.20 SUBAREA RUNOFF(CFS) = 103.81
 EFFECTIVE AREA(ACRES) = 156.80 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 156.80 PEAK FLOW RATE(CFS) = 379.11
******************
 FLOW PROCESS FROM NODE 841.00 TO NODE 842.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 409.00 DOWNSTREAM(FEET) = 405.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 142.00 CHANNEL SLOPE = 0.0282
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 379.11
 FLOW VELOCITY (FEET/SEC.) = 10.56 FLOW DEPTH (FEET) = 3.99
 TRAVEL TIME (MIN.) = 0.22 Tc (MIN.) = 19.08
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 842.00 = 5592.00 FEET.
*******************
 FLOW PROCESS FROM NODE 841.00 TO NODE 842.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 19.08
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.881
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                        Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.10
                                  0.25
                                         1.00 75
 NATURAL FAIR COVER
 "GRASS"
                    C
                          7 90
                                 0.25
                                         1 00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                    C
                          26.10
                                  0.25
                                         1.00 77
 NATURAL FAIR COVER
 "GRASS"
                          19.30
                                  0.20
                                          1 00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          2.10
                                0.20
                                        1.00
 NATURAL FAIR COVER
                                0.20 1.00 79
                          0.90
 "WOODLAND"
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 56.40 SUBAREA RUNOFF(CFS) = 134.57
 EFFECTIVE AREA(ACRES) = 213.20 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 213.20 PEAK FLOW RATE(CFS) =
*****************
 FLOW PROCESS FROM NODE 842.00 TO NODE 843.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 405.00 DOWNSTREAM(FEET) = 348.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 2041.00 CHANNEL SLOPE = 0.0279
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 510.89
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FLOW VELOCITY (FEET/SEC.) = 11.36 FLOW DEPTH (FEET) = 4.66 TRAVEL TIME (MIN.) = 2.99 Tc (MIN.) = 22.07
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 843.00 = 7633.00 FEET.
-----
 FLOW PROCESS FROM NODE 842.00 TO NODE 843.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 22.07
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.643
 SUBAREA LOSS RATE DATA(AMC II):
               SCS SOIL AREA
                                Fp
                                       Ap SCS
 DEVELOPMENT TYPE/
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                          0.60
                                  0.30
                                         1.00
 NATURAL FAIR COVER
 "GRASS"
                    B
                         2.80
                                0.30
                                        1.00 69
 NATURAL FAIR COVER
 "GRASS"
                    C 10.20
                                0.25
                                        1 00 79
 NATURAL FAIR COVER
                    C 17.70 0.25
 "OPEN BRUSH"
                                        1.00 77
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" D 0.30 0.20 1.00 81
 AGRICULTURAL POOR COVER
                   D
                         0.80 0.20 1.00 94
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.25
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 32.40 SUBAREA RUNOFF(CFS) = 69.67
 EFFECTIVE AREA(ACRES) = 245.60 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 245.60
                         PEAK FLOW RATE(CFS) = 534.77
******************
 FLOW PROCESS FROM NODE 842.00 TO NODE 843.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 22.07
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.643
 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"
                        78.70
                                0.20
                                         1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         0.70 0.20
                                       1.00 83
 NATURAL FAIR COVER
 "WOODLAND"
                          2.00
                                0.20 1.00 79
                   D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 81.40 SUBAREA RUNOFF(CFS) = 178.95
 EFFECTIVE AREA(ACRES) = 327.00 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 327.00
                         PEAK FLOW RATE (CFS) = 713.72
*****************
 FLOW PROCESS FROM NODE 843.00 TO NODE 844.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 348.00 DOWNSTREAM(FEET) = 302.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1986.00 CHANNEL SLOPE = 0.0232
 CHANNEL BASE (FEET) = 6.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 6.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 713.72
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FLOW VELOCITY (FEET/SEC.) = 11.51 FLOW DEPTH (FEET) = 5.43 TRAVEL TIME (MIN.) = 2.88 Tc (MIN.) = 24.95
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 844.00 = 9619.00 FEET.
FLOW PROCESS FROM NODE 843.00 TO NODE 844.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 24.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.463
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          0.40
                                  0.25
                                          1.00 75
 NATURAL FAIR COVER
 "GRASS"
                          10.70
                                  0.25
                                         1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          23 90
                                  0.25
                                         1.00 77
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF" D
                         0.30
                                0.20
                                        1.00 81
 NATURAL FAIR COVER
 "GRASS"
                   D 55.10 0.20 1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D
                         9.40 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) = 99.80 SUBAREA RUNOFF (CFS) = 201.71
 EFFECTIVE AREA(ACRES) = 426.80 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 426.80
                        PEAK FLOW RATE(CFS) = 862.61
******************
FLOW PROCESS FROM NODE 843.00 TO NODE 844.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 24.95
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.463
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
                         1.70 0.20 1.00 79
 "WOODLAND"
                   D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 1.70 SUBAREA RUNOFF(CFS) = 3.46
 EFFECTIVE AREA(ACRES) = 428.50 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 428.50 PEAK FLOW RATE(CFS) = 866.07
FLOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 302.00 DOWNSTREAM(FEET) = 273.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1696.00 CHANNEL SLOPE = 0.0171
 CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 866.07
 FLOW VELOCITY (FEET/SEC.) = 10.78 FLOW DEPTH (FEET) = 6.12
 TRAVEL TIME (MIN.) = 2.62 Tc (MIN.) = 27.57
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 845.00 = 11315.00 FEET.
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MAINLINE TC (MIN) = 27.57  * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.327  SUBARBA 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 "GRASS" C 4.90 0.25 1.00 79  NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77  ACRICULTURAL FOOR COVER "OPEN BRUSH" D 10.10 0.20 1.00 94  NATURAL FAIR COVER "OPEN BRUSH" D 0.40 0.20 1.00 94  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 84  SUBARBA AVERAGE PERVIOUS LOSS RATE, FP (INCH/HR) = 0.21  SUBARBA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  SUBARBA AVERAGED FP (INCH/HR) = 0.22 AREA-AVERAGED FM (INCH/HR) = 0.22  EFFECTIVE AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34  ***HOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81  ***HOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81  ***HOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81  ***HOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81  ***HOW PROCESS FROM NODE 846.00 TO NODE 846.00 IS CODE = 81  ***HOW PROCESS FROM NODE 846.00 TO NODE 846.00 IS CODE = 51  ***NATURAL FAIR COVER "MOODLAND" D 3.80 0.20 1.00 83  NATURAL FAIR COVER "MOODLAND" D 3.80 0.20 1.00 79  SUBARBA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  SUBARBA AVERAGE PE	MAINLINE TC (MIN) = 27.57 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.327 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, BROADLEAR" C 0.40 0.25 1.00 75 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 77 AGRICULTURAL FOOR COVER "GRASS" C 4.10 0.25 1.00 77 AGRICULTURAL FOOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAR" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAR" D 0.40 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AREA (ACRES) = 484.00 AREA-AVERAGED FM (INCH/HR) = 0.22 AREA-AVERAGED FF (INCH/HR) = 0.24 AREA-AVERAGED FF (INCH/HR) = 0.22 AREA-AVERAGED FF (INCH/HR) = 0.22 AREA-AVERAGED FF (INCH/HR) = 0.24 AREA-AVERAGED FF (INCH/HR) = 0.22 AREA-AVERAGED FF (INCH/HR) = 0.24 AREA-AVERAGED FF (INCH/HR) = 0.22 AREA-AVERAGED FF (INCH/HR) = 0.24 AREA-AVERAGED FF (INCH/HR) = 0.20 TOTAL AREA (ACRES) = 484.00 PEAK FLOW «XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		EA TO MAINL.	INE PEAK	FLOW<<<<		
** 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.327 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 "GRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "FALLOW" D 35.60 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 35.60 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 TOTAL AREA (ACRES) = 484.00 AREA-AVERAGED FM(INCH/HR) = 0.22 AREA-AVERAGED FP(INCH/HR) = 0.25 ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<	**100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.327 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 "CRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "CRASS" C 4.90 0.25 1.00 77 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER D 35.60 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 105.82 EFFECTIVE AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34 ************************************	MAINLINE Tc(MIN) = 27.					
SUBAREA LOSS RATE DATA (AMC II):  DEVELOPMENT TYPE/ SCS SOIL AREA FD 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 "GRASS" C 4.90 0.25 1.00 79  NATURAL FAIR COVER "GRASS" C 4.10 0.25 1.00 77  AGRICULTURAL POOR COVER "OPEN BRISH" C 4.10 0.25 1.00 77  AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 84  SUBAREA AVERAGE PERVIOUS LOSS RATE, FD (INCH/HR) = 0.21  SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  TOTAL AREA (ACRES) = 484.00 AREA-AVERAGED FM (INCH/HR) = 0.22  AREA-AVERAGED FF (INCH/HR) = 0.22  AREA-AVERAGED FM (INCH/HR) = 0.20  SUBAREA LOSS RATE DATA (AMC II):  DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS  MAINLINE To (MIN) = 27.57  * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.327  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 3.80 0.20 1.00 83  NATURAL FAIR COVER  "WOODLAND" D 2.00 0.20 1.00 79  SUBAREA AVERAGE PERVIOUS LOSS RATE, FP (INCH/HR) = 0.20  SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  SUBAREA AVERAGE PERVI	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 "CHAPARRAI, BROADLEAF" C 0.40 0.25 1.00 75 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "GRASS" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAI, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAI, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAI, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 35.60 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS LOSS RATE, FP (INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA RAEA (ACRES) = 484.00 AREA-AVERAGED Fm (INCH/HR) = 0.22 AREA-AVERAGED FP (INCH/HR) = 0.22 AREA-AVERAGED FM (INCH/HR) = 0.22 AREA-AVERAGED FP (INCH/HR) = 0.22 AREA-AVERAGED FM (INCH/HR) = 0.22 AREA-AVERAGED FO SEMBAREA TO MAINLINE FEAK FLOW<<<<			1/IID) =	2 227		
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 "GRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 84 SUBARRA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.21 SUBARRA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBARRA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBARRA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 TOTAL AREA (ACRES) = 484.00 AREA-AVERAGED FM (INCH/HR) = 0.22 AREA-AVERAGED FP (INCH/HR) = 0.22 AREA-AVERAGED FM (INCH/HR) = 0.20 AREA-AVERAGED FM (INCH/HR) = 0.22 AREA-AVERAGED FM (INCH/HR) = 0.20 AREA-AVERAGED AP (INCH/HR) = 0.20 AREA-AVERAGED FM (INCH/HR) = 0.2	DEVELOPMENT TYPE/ SCS SOIL AREA FD AP SCS LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN NATURAL FAIR COVER "CHAPARRAI, BROADLEAF" C 0.40 0.25 1.00 75 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAI, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 0.40 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 TOTAL AREA (ACRES) = 484.00 AREA-AVERAGED FM(INCH/HR) = 0.22 AREA-AVERAGED AP = 1.00 TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34 PLAND USE GROUP (ACRES) (INCH/HR) = 2.327 SUBAREA RAINFALL INTENSITY (INCH/HR) = 2.327 SUBAREA AVERAGE SATE DATA (AMC II): DEVELOPMENT TYPE/ SCS SOIL AREA FPACTION, AP = 1.00 SUBAREA AVERAGED PERVIOUS AREA FRACTOR SUBAREA AVERAGED AP = 1.00 TOTAL AREA (ACRES) = 484.00 TO NODE 845.00 IS CODE = 81 SUBAREA AVERAGED AP = 1.00 PEAK FLOW RATE (CFS) = 105.82 PEAK FLOW RATE (CFS) = 919.34 PEAK FLOW RATE (CFS) = 105.82 PEAK FLOW RATE (CFS) = 11.10 PEAK FLOW RATE (CFS) = 930.45 PEAK FLOW RATE (CFS) = 10.00 PEAK FLOW RATE (CFS) = 0.0136 CHANNEL BASE (FEET) = 7.00 PEAK FLOW RATE (CFS) = 0.0136 CHANNEL BASE (FEET) = 7.00 PEAK FLOW RATE (CFS) = 0.0136 CHANNEL BASE (FEET) = 7.00 PEAK FLOW RATE (CFS) = 0.0136 CHANNEL BASE (FEET) = 7.00 PEAK FLOW RATE (CFS) = 0.0136 CHANNEL BASE (FEET) = 7.00 PEAK FLOW RATE (CFS) = 0.0136 CHANNEL BASE (FEET) = 7.00 PEAK FLOW PETH (FEET) = 7.00 PEAK FLOW RATE (CFS) = 0.0136 CHANNEL BASE (FE			1/ NK) —	2.321		
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" C 0.40 0.25 1.00 75 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 75 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 84 SUBARRA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.21 SUBARRA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 TOTAL AREA (ACRES) = 484.00 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA (ACRES) = 484.00 PEAR FLOW RATE (CFS) = 919.34 STANDER AVERAGE FROM NODE 844.00 TO NODE 845.00 IS CODE = 81 STANDER AVERAGE FROM NODE 844.00 TO NODE 845.00 IS CODE = 81 STANDER AVERAGE PROVIDED AVERAGED AP = 1.00 SUBARRA AVERAGE PROVIDED AVERAGED AVERAGED AVERAGE PROVIDED AVERAGED AVERAGED AVERAGE PROVIDED AVERAGED AVERAGED AVERAGE PROVIDED AVERAGED AVERAGED AVERAGE PROVIDED AVERAGE AVERAGED FOUNCH/HR) = 0.22 AREA-AVERAGED AVERAGED AVERAGE PROVIDED AVERAGED AVERAGED AVERAGE PROVIDED AVERAGED AVERAGED AVERAGE PROVIDED AVERAGED AVERAGED AVERAGE PROVIDED AVERAGED AVERAGED AVERAGED AVERAGE AV	LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" C 0.40 0.25 1.00 75 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 77 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 84 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 84 NATURAL FAIR COVER "GRASS" D 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS REA FRACTION, Ap = 1.00 SUBAREA AVERAGE PERVIOUS REA FRACTION, Ap = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00 SUBAREA AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED FP(INCH/HR) = 0.22 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED FP(INCH/HR) = 0.22 AREA-AVERAGED FM NODE 844.00 TO NODE 845.00 IS CODE = 81  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<	DEVELOPMENT TYPE/	SCS SOTT	AREA	Fp	Ap	SCS
"CHAPARRAL, BROADLEAF" C 0.40 0.25 1.00 75  NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 79  NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77  AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81  NATURAL FAIR COVER "GRASS" D 35.60 0.20 1.00 84  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  TOTAL AREA (ACRES) = 484.00 AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34  ****  ****  ****  ****  ***  ***  *	"CHAPARRAL, BROADLEAF" C 0.40 0.25 1.00 75 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL FOOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 84 SUBAREA, AVERAGE PERVIOUS LOSS RATE, FD(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AREA (ACRES) = 484.00 PEAK FLOW KATE (FFS) = 105.82 EFFECTIVE AREA (ACRES) = 484.00 PEAK FLOW KATE (CFS) = 919.34  ***********************************	LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
"CHAPARRAL, BROADLEAF" C 0.40 0.25 1.00 75 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 35.60 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 TOTAL AREA (ACRES) = 484.00 AREA-AVERAGED Ap = 1.00 TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34  ***********************************	"CHAPARRAL, BROADLEAF" C 0.40 0.25 1.00 75 NATURAL FAIR COVER "GRASS" C 4.90 0.25 1.00 79 NATURAL FAIR COVER "OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 84 SUBAREA, AVERAGE PERVIOUS LOSS RATE, FD(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA ANEA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 105.82 EFFECTIVE AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34  ***********************************	NATURAL FAIR COVER		,	, , ,	,	
NATURAL FAIR COVER "GRASS"  C 4.90 0.25 1.00 79  NATURAL FAIR COVER "OPEN BRUSH"  D 10.10 0.25 1.00 77  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "CHAPARRAI, BROADLEAF"  D 0.40 0.20 1.00 81  NATURAL FAIR COVER "GRASS"  D 35.60 0.20 1.00 84  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21  SUBAREA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.22  AREA-AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  SUBAREA RAEA (ACRES) = 484.00 REAR-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGE PERVIOUS AREA FRACTION, BEAK FLOW RATE (CFS) = 105.82  EFFECTIVE AREA (ACRES) = 484.00 REAR-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED FD(INCH/HR) = 0.22 AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED FM NODE 844.00 TO NODE 845.00 IS CODE = 81	NATURAL FAIR COVER "GRASS"  C	"CHAPARRAL, BROADLEAF"	C	0.40	0.25	1.00	75
NATURAL FAIR COVER "OPEN BRUSH"  C 4.10 0.25 1.00 77  AGRICULTURAL POOR COVER "FALLOW"  NATURAL FAIR COVER "CHAPARRAI, BROADLEAF"  D 0.40 0.20 1.00 81  NATURAL FAIR COVER "GRASS"  D 35.60 0.20 1.00 84  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AREA (ACRES) = 55.50 SUBAREA RUNOFF(CFS) = 105.82  EFFECTIVE AREA (ACRES) = 484.00 AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34  ****  ****  ****  ***  ***  ***  **	NATURAL FAIR COVER "OPEN BRUSH"  C						
"OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL FOOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "FALLOW" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 35.60 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AREA (ACRES) = 55.50 SUBAREA RUNOFF (CFS) = 105.82 EFFECTIVE AREA (ACRES) = 484.00 AREA-AVERAGED FM (INCH/HR) = 0.22 AREA-AVERAGED FP (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA (ACRES) = 484.00 TO NODE 845.00 IS CODE = 81  ***********************************	"OPEN BRUSH" C 4.10 0.25 1.00 77 AGRICULTURAL POOR COVER "FALLOW" D 10.10 0.20 1.00 94 NATURAL FAIR COVER "CHAPARRAL, BROADLEAR" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "CHAPARRAL, BROADLEAR" D 35.60 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 EFFECTIVE AREA (ACRES) = 484.00 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA (ACRES) = 484.00 PEAK FLOW KATE (CFS) = 919.34  ***********************************	"GRASS"	C	4.90	0.25	1.00	79
AGRICULTURAL FOOR COVER "FALLOW"  D  10.10  0.20  1.00  94  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"  D  0.40  0.20  1.00  81  NATURAL FAIR COVER  "GRASS"  D  35.60  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) = 484.00  SUBAREA AREA (ACRES) = 484.00  AREA-AVERAGED FM (INCH/HR) = 0.22  AREA-AVERAGED FM (INCH/HR) = 0.23  ***********************************	AGRICULTURAL POOR COVER "FALLOW"  D  10.10  0.20  1.00  94  NATURAL FAIR COVER "CHAPARRAL, BROADLEAF"  D  0.40  0.20  1.00  81  NATURAL FAIR COVER "GRASS"  D  35.60  0.20  1.00  84  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AREA (ACRES) = 484.00  SUBAREA AREA (ACRES) = 484.00  TOTAL AREA (ACRES) = 484.00  FEAK FLOW RATE (CFS) = 919.34  ***********************************	NATURAL FAIR COVER					
"FALLOW"  D  10.10  0.20  1.00  94  NATURAL FAIR COVER  "CHAPARRAL, BROADLEAF"  D  0.40  0.20  1.00  81  NATURAL FAIR COVER  "CHAPARRAL, BROADLEAF"  D  35.60  0.20  1.00  84  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  TOTAL AREA (ACRES) = 484.00  TOTAL ARE	"PALLOW"  NATURAL FAIR COVER  "CHAPARRAL, BROADLEAF"  D  0.40  0.20  1.00  81  NATURAL FAIR COVER  "GRASS"  D  35.60  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) = 55.50  SUBAREA RAVERAGED FP(INCH/HR) = 0.22  AREA-AVERAGED AP = 1.00  TOTAL AREA (ACRES) = 484.00  PEAK FLOW RATE (CFS) = 919.34  ***********************************			4.10	0.25	1.00	77
NATURAL FAIR COVER  "CHAPARRAL BROADLEAF" D 0.40 0.20 1.00 81  NATURAL FAIR COVER  "GRASS" D 35.60 0.20 1.00 84  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  TOTAL AREA (ACRES) = 484.00 AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34  ***********************************	NATURAL FAIR COVER "CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER SUBAREA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AREA (ACRES) = 55.50 SUBAREA RUNOFF(CFS) = 105.82 EFFECTIVE AREA (ACRES) = 484.00 AREA-AVERAGED FM(INCH/HR) = 0.22 AREA-AVERAGED FP(INCH/HR) = 0.22 AREA-AVERAGED FM(INCH/HR) = 0.22 AREA-AVERAGED FP(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34 ************************************		R _	10 10	0.00	1 00	0.4
"CHAPARRAL BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 35.60 0.20 1.00 84 SUBAREA AVERAGE PERVIOUS AREA RATE, Fp(INCH/HR) = 0.21 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AREA(ACRES) = 55.50 SUBAREA RUNOFF(CFS) = 105.82 EFFECTIVE AREA(ACRES) = 484.00 AREA-AVERAGED pm (INCH/HR) = 0.22 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED pm (INCH/HR) = 0.22 TOTAL AREA(ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34  ***********************************	"CHAPARRAL, BROADLEAF" D 0.40 0.20 1.00 81 NATURAL FAIR COVER "GRASS" D 35.60 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) = 55.50 SUBAREA RUNOFF(CFS) = 105.82 EFFECTIVE AREA(ACRES) = 484.00 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA(ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34  ***********************************		D	10.10	0.20	1.00	94
NATURAL FAIR COVER  "GRASS"  D  35.60  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) = 55.50  SUBAREA AREA(ACRES) = 484.00  AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED AP = 1.00  TOTAL AREA(ACRES) = 484.00  PEAK FLOW RATE(CFS) = 919.34  ***********************************	NATURAL FAIR COVER  "GRASS"  D  35.60  0.20  1.00  84  SUBARBA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21  SUBARBA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBARBA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBARBA AREA (ACRES) = 55.50  SUBARBA RUNOFF(CFS) = 105.82  EFFECTIVE AREA (ACRES) = 484.00  AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 484.00  PEAK FLOW RATE (CFS) = 919.34  ***********************************		D	0 40	0.20	1 00	0.1
"GRASS" D 35.60 0.20 1.00 84  SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21  SUBAREA AREA (ACRES) = 55.50 SUBAREA RUNOFF(CFS) = 105.82  EFFECTIVE AREA (ACRES) = 484.00 AREA-AVERAGED AP = 1.00  TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34  ***********************************	"GRASS" D 35.60 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) = 55.50 SUBAREA RUNOFF(CFS) = 105.82 EFFECTIVE AREA (ACRES) = 484.00 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34  ***********************************	NATURAL FATE COVER					
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SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AREA(ACRES) = 55.50 SUBAREA RUNOFF(CFS) = 105.82  EFFECTIVE AREA (ACRES) = 484.00 AREA-AVERAGED Fm (INCH/HR) = 0.22  AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34  ***********************************	SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AREA (ACRES) = 55.50  SUBAREA RUNOFF(CFS) = 105.82  EFFECTIVE AREA (ACRES) = 484.00  AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00  PEAK FLOW RATE(CFS) = 919.34  ***********************************	SUBAREA AVERAGE PERVIO	US LOSS RATI	E, Fp(TN	CH/HR) = 0	.21	0.1
SUBARRA AREA(ACRES) = 55.50 SUBAREA RUNOFF(CFS) = 105.82  EFFECTIVE AREA(ACRES) = 484.00 AREA-AVERAGED FM(INCH/HR) = 0.22  AREA-AVERAGED FP(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34  ***********************************	SUBAREA AREA(ACRES) = 55.50					- ·=	
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AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34  ***********************************	AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA(ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34  ***********************************						
TOTAL AREA(ACRES) = 484.00 PEAK FLOW RATE(CFS) = 919.34  ***********************************	TOTAL AREA (ACRES) = 484.00 PEAK FLOW RATE (CFS) = 919.34  ***********************************						
FLOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81	FLOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81  >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<< =================================	TOTAL AREA (ACRES) =	484.00	PEAK	FLOW RATE (C	FS) =	919.34
FLOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81	FLOW PROCESS FROM NODE 844.00 TO NODE 845.00 IS CODE = 81						
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 3.80 0.20 1.00 83  NATURAL FAIR COVER  "WOODLAND" D 2.00 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) = 5.80 SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED FM(INCH/HR) = 0.22  AREA-AVERAGED FP(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	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 3.80 0.20 1.00 83  NATURAL FAIR COVER  "WOODLAND" D 2.00 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) = 5.80 SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED FM(INCH/HR) = 0.22  AREA-AVERAGED FP(INCH/HR) = 0.22 AREA-AVERAGED AP = 1.00  TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	MAINLINE Tc (MIN) = 27.	.57				
DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN  NATURAL FAIR COVER  "OPEN BRUSH" D 3.80 0.20 1.00 83  NATURAL FAIR COVER  "WOODLAND" D 2.00 0.20 1.00 79  SUBAREA AVERAGE PERVIOUS LOSS RATE, FP (INCH/HR) = 0.20  SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  SUBAREA AREA (ACRES) = 5.80 SUBAREA RUNOFF (CFS) = 11.10  EFFECTIVE AREA (ACRES) = 489.80 AREA-AVERAGED FM (INCH/HR) = 0.22  AREA-AVERAGED FP (INCH/HR) = 0.22 AREA-AVERAGED AP = 1.00  TOTAL AREA (ACRES) = 489.80 PEAK FLOW RATE (CFS) = 930.45  ***********************************	DEVELOPMENT TYPE/ SCS SOIL AREA FP AP SCS LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN  NATURAL FAIR COVER  "OPEN BRUSH" D 3.80 0.20 1.00 83  NATURAL FAIR COVER  "WOODLAND" D 2.00 0.20 1.00 79  SUBAREA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.20  SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, AP = 1.00  SUBAREA AREA (ACRES) = 5.80 SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA (ACRES) = 489.80 AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED FP(INCH/HR) = 0.22 AREA-AVERAGED AP = 1.00  TOTAL AREA (ACRES) = 489.80 PEAK FLOW RATE (CFS) = 930.45  ***********************************				2.321		
LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN NATURAL FAIR COVER "OPEN BRUSH"  NATURAL FAIR COVER "WOODLAND"  D  2.00  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) = 5.80  SUBAREA REA (ACRES) = 489.80  AREA-AVERAGED FM (INCH/HR) = 0.22  AREA-AVERAGED FM (INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 489.80  PEAK FLOW RATE (CFS) = 930.45  ***********************************	LAND USE GROUP (ACRES) (INCH/HR) (DECIMAL) CN NATURAL FAIR COVER "OPEN BRUSH"  D  3.80  0.20  1.00  83  NATURAL FAIR COVER "WOODLAND"  D  2.00  SUBAREA AVERAGE PERVIOUS LOSS RATE, FP(INCH/HR) = 0.20  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AREA (ACRES) = 5.80  SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA (ACRES) = 489.80  AREA-AVERAGED FM(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 489.80  PEAK FLOW RATE (CFS) = 930.45  ***********************************	DEVELOPMENT TYPE/	SCS SOIL	AREA	Fn	An	SCS
NATURAL FAIR COVER "OPEN BRUSH"  D  3.80  0.20  1.00  83  NATURAL FAIR COVER "WOODLAND"  D  2.00  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) = 5.80  SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA (ACRES) = 489.80  AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Fp (INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 489.80  PEAK FLOW RATE (CFS) = 930.45  ***********************************	NATURAL FAIR COVER "OPEN BRUSH"  D  3.80  0.20  1.00  83  NATURAL FAIR COVER "WOODLAND"  D  2.00  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) = 5.80  SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA(ACRES) = 489.80  AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 489.80  PEAK FLOW RATE(CFS) = 930.45  ***********************************	LAND USE	GROUP	(ACRES)	(TNCH/HR)	(DECIMAL)	CN
NATURAL FAIR COVER  "WOODLAND" D 2.00 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) = 5.80 SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED FM(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	NATURAL FAIR COVER  "WOODLAND"  D  2.00  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) = 5.80  SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA (ACRES) = 489.80  AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 489.80  PEAK FLOW RATE(CFS) = 930.45  ***********************************	NATURAL FAIR COVER				,	
NATURAL FAIR COVER  "WOODLAND" D 2.00 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) = 5.80 SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED FM(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	NATURAL FAIR COVER  "WOODLAND"  D  2.00  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) = 5.80  SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA (ACRES) = 489.80  AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 489.80  PEAK FLOW RATE(CFS) = 930.45  ***********************************	"ODEN BRIISH"	D	3 80			
SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AREA(ACRES) = 5.80 SUBAREA RUNOFF(CFS) = 11.10 EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AREA(ACRES) = 5.80 SUBAREA RUNOFF(CFS) = 11.10 EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	OT DE DECOM		0.00	0.20	1.00	83
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00 SUBAREA AREA(ACRES) = 5.80 SUBAREA RUNOFF(CFS) = 11.10 EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED FM(INCH/HR) = 0.22 AREA-AVERAGED FP(INCH/HR) = 0.22 TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00  SUBAREA AREA(ACRES) = 5.80 SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED Fm(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************			3.00	0.20	1.00	83
SUBAREA AREA(ACRES) = 5.80 SUBAREA RUNOFF(CFS) = 11.10  EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED FM(INCH/HR) = 0.22  AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	SUBAREA AREA (ACRES) = 5.80 SUBAREA RUNOFF (CFS) = 11.10  EFFECTIVE AREA (ACRES) = 489.80 AREA-AVERAGED Fm (INCH/HR) = 0.22  AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00  TOTAL AREA (ACRES) = 489.80 PEAK FLOW RATE (CFS) = 930.45  ***********************************	NATURAL FAIR COVER "WOODLAND"		2.00	0.20	1.00	
EFFECTIVE AREA(ACRES) = 489.80 AREA-AVERAGED Fm(INCH/HR) = 0.22 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	EFFECTIVE AREA (ACRES) = 489.80 AREA-AVERAGED Fm (INCH/HR) = 0.22 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA (ACRES) = 489.80 PEAK FLOW RATE (CFS) = 930.45  ***********************************	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU	US LOSS RATI	2.00 E, Fp(IN	0.20 CH/HR) = 0	1.00	
AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00 TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU	US LOSS RATI US AREA FRAC	2.00 E, Fp(INC	0.20 CH/HR) = 0 p = 1.00	1.00	79
TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	TOTAL AREA(ACRES) = 489.80 PEAK FLOW RATE(CFS) = 930.45  ***********************************	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA(ACRES) =	US LOSS RATI US AREA FRAC 5.80	2.00 E, Fp(INCTION, Ap	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF	1.00 .20 S) = 11.	79 10
**************************************	**************************************	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) =	US LOSS RATI US AREA FRAG 5.80 = 489.80	2.00 E, Fp(INCTION, A) SUBAREA AREA-	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM	1.00 .20 S) = 11. (INCH/HR)	79 10
FLOW PROCESS FROM NODE 845.00 TO NODE 846.00 IS CODE = 51  >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW< >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <  ELEVATION DATA: UPSTREAM(FEET) = 273.00 DOWNSTREAM(FEET) = 260.00  CHANNEL LENGTH THRU SUBAREA(FEET) = 959.00 CHANNEL SLOPE = 0.0136  CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000  MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00  CHANNEL FLOW THRU SUBAREA(CFS) = 930.45  FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73  TRAVEL TIME(MIN.) = 1.59 TC(MIN.) = 29.16	FLOW PROCESS FROM NODE 845.00 TO NODE 846.00 IS CODE = 51  >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW< >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <  ELEVATION DATA: UPSTREAM(FEET) = 273.00 DOWNSTREAM(FEET) = 260.0  CHANNEL LENGTH THRU SUBAREA (FEET) = 959.00 CHANNEL SLOPE = 0.0136  CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000  MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00  CHANNEL FLOW THRU SUBAREA (CFS) = 930.45  FLOW VELOCITY (FEET/SEC.) = 10.07 FLOW DEPTH (FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED Fp (INCH/F	US LOSS RATI US AREA FRAG 5.80 = 489.80 HR) = 0.22	2.00 E, Fp(ING CTION, A SUBARE AREA-A	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP	1.00 .20 S) = 11. (INCH/HR) = 1.00	79 10 = 0.22
FLOW PROCESS FROM NODE 845.00 TO NODE 846.00 IS CODE = 51  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW< >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<  ELEVATION DATA: UPSTREAM(FEET) = 273.00 DOWNSTREAM(FEET) = 260.00  CHANNEL LENGTH THRU SUBAREA(FEET) = 959.00 CHANNEL SLOPE = 0.0136  CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000  MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00  CHANNEL FLOW THRU SUBAREA(CFS) = 930.45  FLOW VELOCITY (FEET/SEC.) = 10.07 FLOW DEPTH (FEET) = 6.73  TRAVEL TIME (MIN.) = 1.59 TC (MIN.) = 29.16	FLOW PROCESS FROM NODE 845.00 TO NODE 846.00 IS CODE = 51  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW< >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <  CHANNEL LENGTH THRU SUBAREA (FEET) = 273.00 DOWNSTREAM (FEET) = 260.0  CHANNEL LENGTH THRU SUBAREA (FEET) = 959.00 CHANNEL SLOPE = 0.0136  CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000  MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00  CHANNEL FLOW THRU SUBAREA (CFS) = 930.45  FLOW VELOCITY (FEET/SEC.) = 10.07 FLOW DEPTH (FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/F	US LOSS RATI US AREA FRAG 5.80 = 489.80 HR) = 0.22	2.00 E, Fp(ING CTION, A SUBARE AREA-A	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP	1.00 .20 S) = 11. (INCH/HR) = 1.00	79 10 = 0.22
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW< >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)< ====================================	>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW< >>>>TRAVELITME THRU SUBAREA (EXISTING ELEMENT) < ====================================	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA(ACRES) = EFFECTIVE AREA(ACRES) = AREA-AVERAGED FD(INCH/F TOTAL AREA(ACRES) =	US LOSS RATI US AREA FRAC 5.80 = 489.80 HR) = 0.22 489.80	2.00 E, Fp(ING CTION, A SUBARE AREA-A AREA-A PEAK	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP FLOW RATE(C	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) =	79  10 = 0.22 930.45
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW< >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)< ====================================	>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW< >>>>TRAVELITME THRU SUBAREA (EXISTING ELEMENT) < ====================================	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/F TOTAL AREA (ACRES) =	US LOSS RATI US AREA FRAC 5.80 = 489.80 HR) = 0.22 489.80	2.00 E, Fp(INCTION, A) SUBARE. AREA-A PEAK	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP FLOW RATE(C	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) =	79  10 = 0.22  930.45  ***********************************
ELEVATION DATA: UPSTREAM(FEET) = 273.00 DOWNSTREAM(FEET) = 260.00 CHANNEL LENGTH THRU SUBAREA(FEET) = 959.00 CHANNEL SLOPE = 0.0136 CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00 CHANNEL FLOW THRU SUBAREA(CFS) = 930.45 FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73 TRAVEL TIME(MIN.) = 1.59 TC(MIN.) = 29.16	ELEVATION DATA: UPSTREAM(FEET) = 273.00 DOWNSTREAM(FEET) = 260.0 CHANNEL LENGTH THRU SUBAREA(FEET) = 959.00 CHANNEL SLOPE = 0.0136 CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00 CHANNEL FLOW THRU SUBAREA(CFS) = 930.45 FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/F TOTAL AREA (ACRES) =	US LOSS RATI US AREA FRAC 5.80 = 489.80 HR) = 0.22 489.80	2.00 E, Fp(INCTION, A) SUBARE. AREA-A PEAK	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP FLOW RATE(C	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) =	79  10 = 0.22  930.45  ***********************************
CHANNEL LENGTH THRU SUBAREA(FEET) = 959.00 CHANNEL SLOPE = 0.0136 CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00 CHANNEL FLOW THRU SUBAREA(CFS) = 930.45 FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73 TRAVEL TIME(MIN.) = 1.59 TC(MIN.) = 29.16	CHANNEL LENGTH THRU SUBAREA(FEET) = 959.00 CHANNEL SLOPE = 0.0136 CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00 CHANNEL FLOW THRU SUBAREA(CFS) = 930.45 FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/F TOTAL AREA (ACRES) =  ***********************************	US LOSS RATHUS AREA FRAGE 5.80 = 489.80 HR) = 0.22 489.80 ************************************	2.00 E, Fp(INCTION, Ap SUBARE, AREA-A PEAK	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED Ap FLOW RATE(C ************************************	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = ***********************************	79  10 = 0.22  930.45  ***********************************
CHANNEL BASE(FEET) = 7.00 "Z" FACTOR = 1.000  MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00  CHANNEL FLOW THRU SUBAREA(CFS) = 930.45  FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73  TRAVEL TIME(MIN.) = 1.59 TC(MIN.) = 29.16	CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000  MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00  CHANNEL FLOW THRU SUBAREA (CFS) = 930.45  FLOW VELOCITY (FEET/SEC.) = 10.07 FLOW DEPTH (FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/F TOTAL AREA (ACRES) =  ***********************************	US LOSS RATH US AREA FRACE 5.80 = 489.80 HR) = 0.22 489.80 ************************************	2.00 E, Fp(INC CTION, A) SUBARE AREA-A PEAK ******** FO NODE FLOW<<<<	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP FLOW RATE(C *********** 846.00 I	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = ***********************************	79  10 = 0.22  930.45  ***********************************
MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00 CHANNEL FLOW THRU SUBAREA(CFS) = 930.45 FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73 TRAVEL TIME(MIN.) = 1.59 Tc(MIN.) = 29.16	MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 7.00 CHANNEL FLOW THRU SUBAREA(CFS) = 930.45 FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED Fp (INCH/F TOTAL AREA (ACRES) =  ***********************************	US LOSS RATH US AREA FRACE 5.80 = 489.80 HR) = 0.22 489.80 ************************************	2.00 E, Fp(INM CTION, Ay SUBARE, AREA-A PEAK  ********* FO NODE  FLOW<<<<	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP FLOW RATE(C ********** 846.00 I	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = ********* S CODE =	79  10 = 0.22  930.45  ***********************************
CHANNEL FLOW THRU SUBAREA(CFS) = 930.45 FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73 TRAVEL TIME(MIN.) = 1.59 Tc(MIN.) = 29.16	CHANNEL FLOW THRU SUBAREA(CFS) = 930.45 FLOW VELOCITY(FEET/SEC.) = 10.07 FLOW DEPTH(FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED Fp (INCH/FT TOTAL AREA (ACRES) = ************************************	US LOSS RATHUS AREA FRAGE 5.80 = 489.80 HR) = 0.22 489.80 ************************************	2.00 E, Fp(INN, A) SUBARE, AREA AREA-A PEAK ******** FO NODE  FLOW<<<< STING ELI = 273.0 = 959	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED Ap FLOW RATE(C ********* 846.00 I	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = ********* S CODE =	79  10 = 0.22  930.45  ***********************************
FLOW VELOCITY (FEET/SEC.) = 10.07 FLOW DEPTH (FEET) = 6.73 TRAVEL TIME (MIN.) = 1.59 Tc (MIN.) = 29.16	FLOW VELOCITY (FEET/SEC.) = 10.07 FLOW DEPTH (FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/F TOTAL AREA (ACRES) =  ***********************************	US LOSS RATHUS AREA FRAGE 5.80 = 489.80   HR) = 0.22   489.80   ***********************************	2.00 E, Fp(IN' CTION, A SUBARE, AREA-A AREA-A FEAK  ******** FO NODE FLOW<<<< STING EL  273.00 = 959 " FACTOR	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED Ap FLOW RATE(C ********** 846.00 I	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = ********** S CODE =	79  10 = 0.22  930.45  ***********************************
TRAVEL TIME (MIN.) = $1.59$ Tc (MIN.) = $29.16$	FLOW VELOCITY (FEET/SEC.) = 10.07 FLOW DEPTH (FEET) = 6.73	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/ITOTAL AREA (ACRES) = ************************************	US LOSS RATH US AREA FRAG 5.80 = 489.80 HR) = 0.22 489.80  *********** 845.00 ***********  AL CHANNEL UBAREA (EXI: ====================================	2.00 E, Fp(INM CTION, A) SUBARE AREA-A PEAK ******** TO NODE	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP FLOW RATE(C ********** 846.00 I	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = ********** S CODE =	79  10 = 0.22  930.45  ***********************************
		NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED Fp (INCH/F TOTAL AREA (ACRES) =  ***********************************	US LOSS RATH US AREA FRAGE 5.80 489.80 HR) = 0.22 489.80  ********** 845.00 ********** BATEA (EXI) BAREA (EXI) 7.00 "Z' 40 MAXIMUI REA (CFS) =	2.00 E, Fp(INN CTION, A) SUBARE, AREA AREA-A PEAK ******* ****** ******* ******* *******	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED Ap FLOW RATE(C ***********  6 MENT) <<<<< =====0 DOWNSTRE .00 CHANN = 1.000 FEET) = 7	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = *********** S CODE =	79  10 = 0.22  930.45  ***********************************
LONGEST FLOWPATH FROM NODE 830.00 TO NODE 846.00 = 122/4.00 FEET.		NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/F TOTAL AREA (ACRES) =  ***********************************	US LOSS RATHUS AREA FRAGE   = 489.80   HR) = 0.22   489.80   ***********************************	2.00 E, Fp(INN CTION, A) SUBARE, AREA-A PEAK ******* ******* ******* ****** ****** ****	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP FLOW RATE(C **********  6 MENT) <<<<<  EMENT) <<<<<  CONTROL  0 DOWNSTRE  .00 CHANN = 1.000 FEET) = 7 5 DEPTH(FEET)	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = *********** S CODE =	79  10 = 0.22  930.45  ***********************************
	LONGEST FLOWPATH FROM NODE 830.00 TO NODE 846.00 = 12274.00 FEET	NATURAL FAIR COVER "WOODLAND" SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/F TOTAL AREA (ACRES) = ************************************	US LOSS RATHUS AREA FRAGE 5.80 = 489.80    **********************************	2.00 E, Fp(INN, A) SUBARE, AREA-A AREA-A PEAK ******** FO NODE  FLOW<<<< STING ELD = 959 " FACTOR 4 DEPTH( 930.4 FLOW IN.) = 1	0.20 CH/HR) = 0 p = 1.00 A RUNOFF(CF AVERAGED FM VERAGED AP FLOW RATE(C ********** 846.00 I	1.00 .20 S) = 11. (INCH/HR) = 1.00 FS) = ********** S CODE =	79  10 = 0.22  930.45  ************* 51 260.00 0.0136

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______
 MAINLINE Tc (MIN) = 29.16
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.257
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
     LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FAT.LOW"
                            0 90
                                    0.30
                                           1.00 86
 NATURAL FAIR COVER
 "GRASS"
                            0.10
                                   0.30
                                           1.00
                                                 69
                     В
 NATURAL FAIR COVER
 "WOODLAND"
                            0.80
                                    0.30
                                           1.00
 NATURAL FAIR COVER
 "GRASS"
                            2.20
                                    0.25
                                           1.00 79
 AGRICULTURAL POOR COVER
 "FALLOW"
                            3.60 0.20 1.00
                                                 94
 NATURAL FAIR COVER
                          2.50 0.20 1.00 84
 "GRASS"
                     D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.23
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 10.10 SUBAREA RUNOFF(CFS) = 18.44
 EFFECTIVE AREA(ACRES) = 499.90 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 499.90 PEAK FLOW RATE(CFS) = 930.45
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*********************
FLOW PROCESS FROM NODE 845.00 TO NODE 846.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc(MIN) = 29.16
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.257
 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"
                          0.50
                                 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) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 0.70 SUBAREA RUNOFF(CFS) = 1.30
 EFFECTIVE AREA(ACRES) = 500.60 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 500.60 PEAK FLOW RATE(CFS) =
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****
 FLOW PROCESS FROM NODE 846.00 TO NODE 847.00 IS CODE = 31
 >>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW) <<<<
ELEVATION DATA: UPSTREAM(FEET) = 260.00 DOWNSTREAM(FEET) = 250.00
 FLOW LENGTH (FEET) = 1251.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 108.0 INCH PIPE IS 78.5 INCHES
 PIPE-FLOW VELOCITY (FEET/SEC.) = 18.78
 ESTIMATED PIPE DIAMETER (INCH) = 108.00 NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 930.45
 PIPE TRAVEL TIME (MIN.) = 1.11 Tc (MIN.) = 30.27
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 847.00 = 13525.00 FEET.
********************
 FLOW PROCESS FROM NODE 846.00 TO NODE 847.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<

>>>>ADDITION OF SUBAR					
MAINLINE Tc (MIN) = 30					
* 100 YEAR RAINFALL IN		CH/HR) =	2.210		
SUBAREA LOSS RATE DATA					
DEVELOPMENT TYPE/			Fp	Ap	SCS
LAND USE	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER	2				
"FALLOW"	В	1.90	0.30	1.00	86
NATURAL FAIR COVER					
"GRASS"	В	1.60	0.30	1.00	69
NATURAL FAIR COVER					
"OPEN BRUSH"	В	1.00	0.30 0.30	1.00	66
COMMERCIAL	В	1.60	0.30	0.10	56
NATURAL FAIR COVER	D	0 50	0.20	1 00	60
"WOODLAND"		0.50	0.30	1.00	60
AGRICULTURAL POOR COVER "FALLOW"	, C	0 20	0.25	1 00	9.1
SUBAREA AVERAGE PERVIOU					<i>9</i> ±
SUBAREA AVERAGE PERVIOU				. 50	
SUBAREA AREA(ACRES) =	6.80	SUBARE	A RUNOFF(CF	(S) = 120	) 9
EFFECTIVE AREA(ACRES) =	= 507.40	AREA-	AVERAGED Fm	(INCH/HR) =	= 0.22
AREA-AVERAGED Fp (INCH/	HR) = 0.22	AREA-A	VERAGED Ap	= 1.00	<del>-</del>
TOTAL AREA(ACRES) =					30.45
NOTE: PEAK FLOW RATE DE					
******					
FLOW PROCESS FROM NODE					
>>>>ADDITION OF SUBAR					
		CH/HR) =	2.210		
* 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA	TENSITY(INC				
* 100 YEAR RAINFALL IN SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/	TENSITY(INC (AMC II): SCS SOIL	AREA	Fp		
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE	TENSITY(INC (AMC II): SCS SOIL	AREA	Fp		
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER	TENSITY (INC (AMC II): SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	(DECIMAL)	CN
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GPASS"	TENSITY (INC (AMC II): SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	(DECIMAL)	CN 79
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER	TENSITY (INC (AMC II): SCS SOIL GROUP	AREA (ACRES)	Fp (INCH/HR)	(DECIMAL)	CN 79
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER	FENSITY (INC (AMC II): SCS SOIL GROUP C	AREA (ACRES)	Fp (INCH/HR)	(DECIMAL)	CN 79
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER	TENSITY (INC (AMC II): SCS SOIL GROUP C C	AREA (ACRES) 7.40 3.30	Fp (INCH/HR) 0.25 0.25	(DECIMAL) 1.00 1.00	CN 79 77
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVE! "FALLOW"	TENSITY (INC (AMC II): SCS SOIL GROUP C C	AREA (ACRES) 7.40 3.30	Fp (INCH/HR)	(DECIMAL) 1.00 1.00	CN 79 77
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER	TENSITY (INC (AMC II): SCS SOIL GROUP C C	AREA (ACRES) 7.40 3.30 2.30	Fp (INCH/HR) 0.25 0.25 0.20	(DECIMAL)  1.00  1.00  1.00	CN 79 77 94
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVE! "FALLOW" NATURAL FAIR COVER "GRASS"	TENSITY (INC (AMC II): SCS SOIL GROUP C C	AREA (ACRES) 7.40 3.30 2.30	Fp (INCH/HR) 0.25 0.25	(DECIMAL)  1.00  1.00  1.00	CN 79 77 94
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER	TENSITY (INC (AMC II): SCS SOIL GROUP C C C D	AREA (ACRES) 7.40 3.30 2.30 24.90	Fp (INCH/HR) 0.25 0.25 0.20	1.00 1.00 1.00 1.00	CN 79 77 94 84
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER	TENSITY (INC (AMC II): SCS SOIL GROUP C C C D	AREA (ACRES) 7.40 3.30 2.30 24.90	Fp (INCH/HR) 0.25 0.25 0.20	1.00 1.00 1.00 1.00	CN 79 77 94 84
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL	TENSITY (INC (AMC II): SCS SOIL GROUP C C C D D	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30	Fp (INCH/HR) 0.25 0.25 0.20 0.20 0.20 0.20	1.00 1.00 1.00 1.00 1.00 1.00	CN 79 77 94 84
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVE! "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOU	TENSITY (INC (AMC II): SCS SOIL GROUP C C C D D JS LOSS RAT	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(IN	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  CH/HR) = 0	1.00 1.00 1.00 1.00 1.00 1.00	CN 79 77 94 84
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVE! "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUSUBAREA AVERAGE PERVIOUSUBAREA	TENSITY (INC (AMC II): SCS SOIL GROUP C C C R D D JS LOSS RAT JS AREA FRA	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 2F, Fp(IN	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  CH/HR) = 0 p = 0.84	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21	CN 79 77 94 84 83 75
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) =	TENSITY (INC (AMC II): SCS SOIL GROUP C C C D D US LOSS RAT JS AREA FRA 53.40	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 PE, FP(IN	Fp (INCH/HR) 0.25 0.25 0.20 0.20 0.20 0.20 0.20 0.20	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  2.01  3.21  S) = 97.6	CN 79 77 94 84 83 75
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) =	TENSITY (INC (AMC II): SCS SOIL GROUP C C C R D D D JS LOSS RAT JS AREA FRA 53.40 = 560.80	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 GE, FP(IN ACTION, A. SUBARE. AREA-	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  0.40  0.20  0.20  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  2.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	CN 79 77 94 84 83 75
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/I	TENSITY (INC (AMC II): SCS SOIL GROUP  C C R D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22	AREA (ACRES)  7.40  3.30  2.30  24.90  6.20 9.30  CE, Fp(IN ACTION, A SUBARE AREA-A 2 AREA-A	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  CH/HR) = 0 p = 0.84 A RUNOFF(CF AVERAGED Fm VERAGED Ap	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98	CN 79 77 94 84 83 75
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" NATURAL FAIR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/I	TENSITY (INC (AMC II): SCS SOIL GROUP  C C R D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22	AREA (ACRES)  7.40  3.30  2.30  24.90  6.20 9.30  CE, Fp(IN ACTION, A SUBARE AREA-A 2 AREA-A	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  CH/HR) = 0 p = 0.84 A RUNOFF(CF AVERAGED Fm VERAGED Ap	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98	CN 79 77 94 84 83 75
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" ACRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUSUBAREA AVERAGE PERVIOUSUBAREA AVERAGE PERVIOUSUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FD (INCH/ITOTAL AREA (ACRES) =	TENSITY (INC (AMC II): SCS SOIL GROUP  C C C R D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(IN ACTION, A SUBARE AREA-A PEAK	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  CH/HR) = 0 p = 0.84 A RUNOFF(CF AVERAGED FM VERAGED FM VERAGED AP FLOW RATE(C	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10	CN 79 77 94 84 83 75  62 60 60 60 60 60 60 60 60 60 60 60 60 60
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" ACGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/I	TENSITY (INC (AMC II): SCS SOIL GROUP  C C C D D US LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22 560.80	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 ACTION, A SUBARE AREA-A PEAK	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  0.40  0.20  0.20  0.20  0.40  A RUNOFF (CF AVERAGED FM VERAGED AP FLOW RATE (C	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10	CN 79 77 94 84 83 75  32 = 0.21 007.80
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOU TOTAL AREA (ACRES) = AREA-AVERAGED FP (INCH/IT TOTAL AREA (ACRES) =	TENSITY (INC (AMC II): SCS SOIL GROUP  C C C D D US LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22 560.80	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(IN ACTION, A SUBARE AREA-A PEAK	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  0.40  0.20  0.20  0.20  0.40  A RUNOFF (CF AVERAGED FM VERAGED AP FLOW RATE (C	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10	CN 79 77 94 84 83 75  32 = 0.21 007.80
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (ACRES) = AREA-AVERAGED FP (INCH/I TOTAL AREA (ACRES) = ************************************	TENSITY (INC (AMC II): SCS SOIL GROUP  C C R D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22 560.80	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(IN ACTION, A. SUBARE 10 AREA—12 AREA—14 PEAK ************************************	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  CH/HR) = 0 p = 0.84 A RUNOFF(CF AVERAGED FM VERAGED FM VERAGED AP FLOW RATE(C ************************************	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10	CN 79 77 94 84 83 75  32 = 0.21 007.80
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUS TOTAL AREA (ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (ACRES) = TOTAL AREA (ACRES) = TOTAL AREA (ACRES) = ************************************	TENSITY (INC (AMC II): SCS SOIL GROUP  C C R D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22 560.80	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(INACTION, ASUBARE. AREA-APEAK PEAK ************************************	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  CH/HR) = 0 p = 0.84 A RUNOFF (CF AVERAGED FROW RATE (CF)  ***********************************	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10  ***********************************	CN 79 77 94 84 83 75 52 = 0.21 007.80
SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (ACRES) = TOTAL AREA (ACRES) =  ***********************************	TENSITY (INC (AMC II): SCS SOIL GROUP  C C C R D D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 ++++++++++ 846.00	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(INACTION, ASUBARE. AREA-APEAK PEAK ************************************	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  CH/HR) = 0 p = 0.84 A RUNOFF (CF AVERAGED FROW RATE (CF)  ***********************************	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10  ***********************************	CN 79 77 94 84 83 75 52 = 0.21 007.80
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (ACRES) = ************************************	TENSITY (INC (AMC II):     SCS SOIL     GROUP     C     C     C     D     D     D     JS LOSS RAT     S 53.40 = 560.80 +++++++++     846.00	AREA (ACRES)  7.40  3.30  2.30  24.90  6.20  9.30  7.40  8.30  2.30  24.90  6.20  9.30  7.40  8.30  8.40  9.30  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  0.40  0.20  0.20  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10  ***********************************	CN 79 77 94 84 83 75 52 = 0.21 007.80
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AVERAGE PERVIOU SUBAREA AREA (ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (ACRES) = ************************************	TENSITY (INC (AMC II): SCS SOIL GROUP C C C R D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 ********** 846.00	AREA (ACRES)  7.40  3.30  2.30  24.90  6.20  9.30  7.40  8.30  2.30  24.90  6.20  9.30  7.40  8.30  8.40  9.30  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.50  8.	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  0.40  0.20  0.20  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40  0.40	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10  ***********************************	CN 79 77 94 84 83 75 52 = 0.21 007.80
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS AREA—AVERAGED FP (INCH/I TOTAL AREA (ACRES) =  ***********************************	TENSITY (INC (AMC II): SCS SOIL GROUP  C C R D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22 560.80 ************* 846.00	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(IN ACTION, A SUBARE 1 AREA-A PEAK ******** TO NODE LINE PEAK ********** TO NODE LINE PEAK	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  CH/HR) = 0 p = 0.84 A RUNOFF(CF AVERAGED FM VERAGED FM VERAGED AP FLOW RATE(C ************************************	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10  ***********************************	CN 79 77 94 84 83 75 52 = 0.21 007.80  ***********************************
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVER "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (ACRES) = ************************************	TENSITY (INC (AMC II):     SCS SOIL     GROUP     C     C     C     D     D     D     JS LOSS RAT    JS AREA FRA    53.40 = 560.80 *********    846.00 EA TO MAINI =======2.27 TENSITY (INC (AMC II):    SCS SOIL	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(IN ACTION, A. SUBARE. 2 AREA-A. PEAK TO NODE LINE PEAK CH/HR) = AREA	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  0.40  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10  ***********************************	CN 79 77 94 84 83 75 62 = 0.21 007.80 8***********************************
* 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" AGRICULTURAL POOR COVEI "FALLOW" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "GRASS" NATURAL FAIR COVER "OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOU SUBAREA FERGURA (ACRES) = ************************************	TENSITY (INC (AMC II): SCS SOIL GROUP  C C R D D JS LOSS RAT JS AREA FRA 53.40 = 560.80 HR) = 0.22 560.80 ************* 846.00	AREA (ACRES) 7.40 3.30 2.30 24.90 6.20 9.30 CE, FP(IN ACTION, A. SUBARE. 2 AREA-A. PEAK TO NODE LINE PEAK CH/HR) = AREA	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  0.40  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10  ***********************************	CN 79 77 94 84 83 75 62 = 0.21 007.80 8***********************************
CHOO YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE  NATURAL FAIR COVER 'GRASS" NATURAL FAIR COVER 'OPEN BRUSH" AGRICULTURAL POOR COVER 'FALLOW" NATURAL FAIR COVER 'GRASS" NATURAL FAIR COVER 'OPEN BRUSH" COMMERCIAL SUBAREA AVERAGE PERVIOUS SUBAREA ACRES) = EFFECTIVE AREA (ACRES) = EFFECTIVE AREA (AC	TENSITY (INC (AMC II):     SCS SOIL     GROUP     C     C     C     D     D     D     JS LOSS RAT    JS AREA FRA    53.40 = 560.80 *********    846.00 EA TO MAINI =======2.27 TENSITY (INC (AMC II):    SCS SOIL	AREA (ACRES)  7.40  3.30  2.30  24.90  6.20  9.30  CE, FP(IN ACTION, A. SUBAREL AREA-A PEAK  ******** TO NODE	Fp (INCH/HR)  0.25  0.25  0.20  0.20  0.20  0.20  0.40  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20	(DECIMAL)  1.00  1.00  1.00  1.00  1.00  0.10  .21  S) = 97.6 (INCH/HR) = 0.98 FS) = 10  ************* S CODE = 8	CN 79 77 94 84 83 75 62 = 0.21 007.80 8***********************************

0.20

D

0.20

1.00 79

"WOODLAND"

```
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) = 0.36
 EFFECTIVE AREA(ACRES) = 561.00 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp (INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 561.00 PEAK FLOW RATE(CFS) = 1008.16
******************
 FLOW PROCESS FROM NODE 847.00 TO NODE 848.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 250.00 DOWNSTREAM(FEET) = 175.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1353.00 CHANNEL SLOPE = 0.0554
 CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1008.16
 FLOW VELOCITY (FEET/SEC.) = 17.35 FLOW DEPTH (FEET) = 4.89
 TRAVEL TIME (MIN.) = 1.30 Tc (MIN.) = 31.57
 LONGEST FLOWPATH FROM NODE 830.00 TO NODE 848.00 = 14878.00 FEET.
*******************
 FLOW PROCESS FROM NODE 847.00 TO NODE 848.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 31.57
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.160
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                         Ар
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                            5.00
                                   0.30
                                           1.00
                                                 86
 NATURAL FAIR COVER
                          1.60
                                 0.30
                                         1.00 69
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           0.40 0.30
                                          1.00 66
 NATURAL FAIR COVER
                           0.40 0.30
 "WOODLAND"
                                         1.00 60
 AGRICULTURAL POOR COVER
                   С
 "FALLOW"
                           3.30
                                 0.25
                                         1.00 91
 NATURAL FAIR COVER
 "GRASS"
                    С
                           0.50
                                  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) = 11.20 SUBAREA RUNOFF(CFS) = 18.92
 EFFECTIVE AREA(ACRES) = 572.20 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.98
 TOTAL AREA (ACRES) = 572.20 PEAK FLOW RATE (CFS) = 1008.16
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 847.00 TO NODE 848.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 31.57
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.160
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fρ
                                         Aρ
                                              SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "OPEN BRUSH"
                           3.30
                                 0.25
                                        1.00 77
 AGRICULTURAL POOR COVER
                           0.10 0.20 1.00 94
 "FALLOW"
 NATURAL FAIR COVER
```

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"GRASS"
                               1.80
                                       0.20
                                               1.00
 NATURAL FAIR COVER
                             2.80 0.20 1.00 83
 "OPEN BRUSH"
                     D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 8.00 SUBAREA RUNOFF(CFS) = 13.97
 EFFECTIVE AREA(ACRES) = 580.20 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.98
 TOTAL AREA(ACRES) = 580.20 PEAK FLOW RATE(CFS) = 1016.12
*******************
 FLOW PROCESS FROM NODE 848.00 TO NODE 848.00 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.) = 31.57
 RAINFALL INTENSITY (INCH/HR) = 2.16
 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22
 AREA-AVERAGED Ap = 0.98
 EFFECTIVE STREAM AREA(ACRES) = 580.20
 TOTAL STREAM AREA(ACRES) = 580.20
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 1016.12
 ** CONFLUENCE DATA **
 STREAM Q
                Tc
                               HEADWATER
                         AREA
 NUMBER (CFS) (MIN.) (ACRES)
                                NODE
                                  3100.00
   1
        4748.70 63.58 4603.60
         1016.12 31.57
                        580 20
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 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.) = 16.0%; VALLEY (UNDEV.) / DESERT= 8.0%
      MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.06; LAG(HR) = 0.85; Fm(INCH/HR) = 0.24; Ybar = 0.42
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 5.00 TOTAL AREA(ACRES) = 5183.80
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 848.00 = 41239.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0295; Lca/L=0.4, n=.0265; Lca/L=0.5, n=.0243; Lca/L=0.6, n=.0227
 TIME OF PEAK FLOW(HR) = 16.58 RUNOFF VOLUME(AF) = 1524.92
 PEAK FLOW RATE (CFS) = 4134.05
   (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4748.70)
 PEAK FLOW RATE (CFS) USED = 4748.70
*****
 FLOW PROCESS FROM NODE 848.00 TO NODE 864.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
ELEVATION DATA: UPSTREAM(FEET) = 175.00 DOWNSTREAM(FEET) = 154.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 6117.00 CHANNEL SLOPE = 0.0034
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4748.70
 FLOW VELOCITY (FEET/SEC.) = 8.52 FLOW DEPTH (FEET) = 5.77
 TRAVEL TIME (MIN.) = 11.97 Tc (MIN.) = 75.55
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 864.00 = 47356.00 FEET.
********************
 FLOW PROCESS FROM NODE 848.00 TO NODE 864.00 IS CODE = 81
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc(MIN) = 75.55
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.305
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                               Aρ
     LAND USE
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                              0.90
                                       0.40
                                                1.00
                                                       50
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                              0.80
                                     0.40
                                                1.00 44
 NATURAL FAIR COVER
 "OPEN BRUSH"
                       A
                             3.10
                                       0.40
                                                1.00
                                                       46
 COMMERCIAL
                       A
                              13.10
                                       0.40
                                                0.10
                                                       32
 RESIDENTIAL
 "11+ DWELLINGS/ACRE" A 0.20
                                     0.40
                                             0.20
                                                       32
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE" A 2.60 0.40 0.60
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.37
 SUBAREA AREA(ACRES) = 20.70
 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.) = 16.0%; VALLEY(UNDEV.) / DESERT = 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.42
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5204.50
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0309; Lca/L=0.4, n=.0277; Lca/L=0.5, n=.0254; Lca/L=0.6, n=.0237
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1531.04
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3617.22
 TOTAL AREA (ACRES) = 5204.50 PEAK FLOW RATE (CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 848.00 TO NODE 864.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 75.55
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.305
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                    Fp
                                              Ap SCS
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "WOODLAND"
                              13.70
                                       0.40
                                                1.00
                                                       36
 AGRICULTURAL POOR COVER
 "FALLOW"
                             2.90
                                       0.30
                                                1.00
                                                       86
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                              16.50
                                       0.30
                                                0.50
 NATURAL FAIR COVER
 "GRASS"
                              1.80
                                       0.30
                        B
                                                1.00
                                                       69
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                              0.20
                                     0.30
                       B
                                               1.00
                                                       65
 NATURAL FAIR COVER
 "OPEN BRUSH"
                             0.60 0.30 1.00
                       В
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.35
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.77
 SUBAREA AREA(ACRES) = 35.70
 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.) = 16.0%; VALLEY(UNDEV.)/DESERT= 8.0%
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MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.)= 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.42
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5240.20
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0309; Lca/L=0.4, n=.0277; Lca/L=0.5, n=.0254; Lca/L=0.6, n=.0237
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1538.84
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3636.95
 TOTAL AREA (ACRES) = 5240.20
                              PEAK FLOW RATE(CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 848.00 TO NODE 864.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
MAINLINE To (MIN) = 75.55
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.305
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                     SCS SOIL AREA
                                                Αp
     LAND USE
                      GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 COMMERCIAL
                       В
                              23.00
                                       0.30
                                                0.10
                                                      56
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                               9 40
                                                1.00
                       В
                                       0.30
                                                      69
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"
                       B
                               0.70
                                       0.30
                                                0.20
                                                      56
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                               0.10
                                       0.30
                                                0.60
                                                      56
 NATURAL FAIR COVER
                                       0.30
 "WOODT AND"
                               4.50
                                               1.00
 NATURAL FAIR COVER
 "GRASS"
                       С
                              91.40
                                      0.25
                                              1.00
                                                      79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.84
 SUBAREA AREA(ACRES) = 129.10
 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.) = 16.0%; VALLEY(UNDEV.)/DESERT= 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.24; Ybar = 0.42
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.78; 30M = 0.78; 1HR = 0.78;
 3HR = 0.97; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5369.30
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0309; Lca/L=0.4, n=.0277; Lca/L=0.5, n=.0254; Lca/L=0.6, n=.0237
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1577.86
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3715.89
 TOTAL AREA(ACRES) = 5369.30
                             PEAK FLOW RATE (CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****
 FLOW PROCESS FROM NODE 848.00 TO NODE 864.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE TO (MIN) = 75.55
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.305
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/
                     SCS SOIL AREA
                                                      SCS
                                       Fρ
                                                Aρ
     LAND USE
                      GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "OPEN BRUSH"
                       С
                               5.70
                                       0.25
                                                1.00 77
```

```
0.25
                                  0.20
                                                     0.85
 PUBLIC PARK
 NATURAL FAIR COVER
 "WOODLAND"
                                 10.50
                                           0.25
                                                     1.00
                                                            7.3
 AGRICULTURAL POOR COVER
 "FAT.T.OW"
                                 16.50
                                           0.20
                                                     1.00
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                          D
                                 32 20
                                         0.20
                                                    0.50
                                                            75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.69
 SUBAREA AREA(ACRES) = 71.70
 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.) = 16.0%; VALLEY(UNDEV.) / DESERT= 8.0%
         MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.42
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL (MIN) = 10.00 TOTAL AREA (ACRES) = 5441.00
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 864.00 = 47356.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254; Lca/L=0.6,n=.0237
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1602.79
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3763.63
 TOTAL AREA(ACRES) = 5441.00
                                 PEAK FLOW RATE (CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
 FLOW PROCESS FROM NODE 848.00 TO NODE 864.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 75.55
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.305
 SUBAREA LOSS RATE DATA (AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                          Fρ
                                                           SCS
                                                    Αp
      LAND USE
                        GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                                 22.50
                          D
                                           0.20
                                                     1.00
                                                            84
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                                 0.70
                                           0.20
                                                     1.00
                                                            82
                          D
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          D
                                 12.90
                                           0.20
                                                     1.00
                                                            8.3
 COMMERCIAL
                          D
                                  5.50
                                           0.20
                                                     0.10
                                                            75
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                                 1.80
                                           0.20
                                                     1.00
 RESIDENTIAL.
 "11+ DWELLINGS/ACRE"
                          D
                                 20.20
                                         0.20
                                                    0.20
                                                            75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.67
 SUBAREA AREA(ACRES) = 63.60
 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.) = 16.0%; VALLEY(UNDEV.)/DESERT= 8.0%
         MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.41
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5504.60
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254; Lca/L=0.6,n=.0237
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1625.53
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3806.73
 TOTAL AREA(ACRES) = 5504.60 PEAK FLOW RATE(CFS) = 4748.70
```

0.25

0.10

69

6.60

COMMERCIAL

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NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
******************
FLOW PROCESS FROM NODE 848.00 TO NODE 864.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 75.55
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.305
 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 23.10
                                  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) = 23.10
 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.) = 16.0%; VALLEY(UNDEV.)/DESERT= 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.23; Ybar = 0.41
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.77; 30M = 0.77; 1HR = 0.77;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5527.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0309; Lca/L=0.4, n=.0277; Lca/L=0.5, n=.0254; Lca/L=0.6, n=.0237
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1632.36
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3820.89
 TOTAL AREA(ACRES) = 5527.70 PEAK FLOW RATE(CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
 FLOW PROCESS FROM NODE 864.00 TO NODE 864.00 IS CODE = 1
______
 >>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE <<<
______
 TOTAL NUMBER OF STREAMS = 2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 PEAK FLOW RATE(CFS) = 4748.70 Tc(MIN.) = 75.55
 AREA-AVERAGED Fm(INCH/HR) = 0.23 Ybar = 0.41
 TOTAL AREA(ACRES) = 5527.70
FLOW PROCESS FROM NODE 850.00 TO NODE 851.00 IS CODE = 21
______
 >>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<
>>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
_____
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 328.00
 ELEVATION DATA: UPSTREAM(FEET) = 718.00 DOWNSTREAM(FEET) = 600.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 5.000
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 6.190
 SUBAREA To AND LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                  Fρ
                                           Ap SCS Tc
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
     LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                    D
                          0.80
                                   0.20 0.50 75 5.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA RUNOFF (CFS) = 4.38
 TOTAL AREA(ACRES) = 0.80 PEAK FLOW RATE(CFS) = 4.38
```

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FLOW PROCESS FROM NODE 851.00 TO NODE 852.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 600.00 DOWNSTREAM(FEET) = 560.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 144.00 CHANNEL SLOPE = 0.2778
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4.38
 FLOW VELOCITY (FEET/SEC.) = 7.99 FLOW DEPTH (FEET) = 0.39
 TRAVEL TIME (MIN.) = 0.30 Tc (MIN.) = 5.30
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 852.00 = 472.00 FEET.
*****
FLOW PROCESS FROM NODE 851.00 TO NODE 852.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE TO (MIN) = 5.30
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 6.035
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA FO AD SCS
   LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 1.10 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA AREA(ACRES) = 1.10 SUBAREA RUNOFF(CFS) = 5.88
 EFFECTIVE AREA(ACRES) = 1.90 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.50
 TOTAL AREA (ACRES) = 1.90 PEAK FLOW RATE (CFS) =
***********************
FLOW PROCESS FROM NODE 852.00 TO NODE 853.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 560.00 DOWNSTREAM(FEET) = 540.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 100.00 CHANNEL SLOPE = 0.2000
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 10.15
 FLOW VELOCITY (FEET/SEC.) = 8.85 FLOW DEPTH (FEET) = 0.68
 TRAVEL TIME (MIN.) = 0.19 Tc (MIN.) = 5.49
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 853.00 = 572.00 FEET.
******************
FLOW PROCESS FROM NODE 852.00 TO NODE 853.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
MAINLINE Tc(MIN) = 5.49
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 5.938
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 1.30 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA AREA(ACRES) = 1.30 SUBAREA RUNOFF(CFS) = 6.83
 EFFECTIVE AREA(ACRES) = 3.20 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.50
 TOTAL AREA(ACRES) = 3.20 PEAK FLOW RATE(CFS) =
                                              16 81
```

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*****
 FLOW PROCESS FROM NODE 853.00 TO NODE 854.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 540.00 DOWNSTREAM(FEET) = 510.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 115.00 CHANNEL SLOPE = 0.2609
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 16.81
 FLOW VELOCITY (FEET/SEC.) = 11.13 FLOW DEPTH (FEET) = 0.83
 TRAVEL TIME (MIN.) = 0.17 Tc (MIN.) = 5.66 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 854.00 = 687.00 FEET.
******************
 FLOW PROCESS FROM NODE 853.00 TO NODE 854.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 5.66
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.849
 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 2.40
                                 0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA AREA(ACRES) = 2.40 SUBAREA RUNOFF(CFS) = 12.42
 EFFECTIVE AREA(ACRES) = 5.60 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.50
 TOTAL AREA(ACRES) = 5.60 PEAK FLOW RATE(CFS) =
                                                28 97
*******************
 FLOW PROCESS FROM NODE 854.00 TO NODE 855.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 510.00 DOWNSTREAM(FEET) = 468.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 167.00 CHANNEL SLOPE = 0.2515
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                           28 97
 FLOW VELOCITY (FEET/SEC.) = 12.36 FLOW DEPTH (FEET) = 0.83
 TRAVEL TIME (MIN.) = 0.23 Tc (MIN.) = 5.89
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 855.00 = 854.00 FEET.
*****
 FLOW PROCESS FROM NODE 854.00 TO NODE 855.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 5.89
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 5.733
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                   D
                         2.80
                                  0.20
                                        0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.50
 SUBAREA AREA(ACRES) = 2.80 SUBAREA RUNOFF(CFS) = 14.19
 EFFECTIVE AREA(ACRES) = 8.40 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.50
```

```
TOTAL AREA(ACRES) =
                         PEAK FLOW RATE(CFS) =
                8.40
                                           42 58
******************
FLOW PROCESS FROM NODE 855.00 TO NODE 856.00 IS CODE = 51
______
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 468.00 DOWNSTREAM(FEET) = 445.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 115.00 CHANNEL SLOPE = 0.2000
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 42.58
 FLOW VELOCITY (FEET/SEC.) = 12.67 FLOW DEPTH (FEET) = 1.09
 TRAVEL TIME (MIN.) = 0.15 Tc (MIN.) = 6.04
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 856.00 = 969.00 FEET.
FLOW PROCESS FROM NODE 855.00 TO NODE 856.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 6.04
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.655
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                  D
                       0.40 0.20 1.00 94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                D
                        3.10
                              0.20 0.50 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.56
 SUBAREA AREA(ACRES) = 3.50 SUBAREA RUNOFF(CFS) = 17.46
 EFFECTIVE AREA(ACRES) = 11.90 AREA-AVERAGED Fm(INCH/HR) = 0.10
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.52
 TOTAL AREA(ACRES) = 11.90 PEAK FLOW RATE(CFS) =
******************
FLOW PROCESS FROM NODE 856.00 TO NODE 857.00 IS CODE = 51
______
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 445.00 DOWNSTREAM(FEET) = 366.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 423.00 CHANNEL SLOPE = 0.1868
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 59.45
 FLOW VELOCITY (FEET/SEC.) = 13.42 FLOW DEPTH (FEET) = 1.33
 TRAVEL TIME (MIN.) = 0.53 Tc (MIN.) = 6.56
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 857.00 = 1392.00 FEET.
*******************
FLOW PROCESS FROM NODE 856.00 TO NODE 857.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
MAINLINE Tc (MIN) = 6.56
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 5.384
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                             Fp Ap
    LAND USE
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                        2.30
                                0.20
                                      1.00 94
 RESIDENTIAL
                 D 1.00 0.20
 "5-7 DWELLINGS/ACRE"
                                       0.50 75
```

```
NATURAL FAIR COVER
                    D 1.30 0.20 1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA (ACRES) = 4.60 SUBAREA RUNOFF (CFS) = 21.55
 EFFECTIVE AREA(ACRES) = 16.50 AREA-AVERAGED Fm(INCH/HR) = 0.12
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.62
 TOTAL AREA(ACRES) = 16.50 PEAK FLOW RATE(CFS) =
                                             78 10
******************
 FLOW PROCESS FROM NODE 857.00 TO NODE 858.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
-----
 ELEVATION DATA: UPSTREAM(FEET) = 366.00 DOWNSTREAM(FEET) = 300.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 574.00 CHANNEL SLOPE = 0.1150
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 78.10
 FLOW VELOCITY (FEET/SEC.) = 12.05 FLOW DEPTH (FEET) = 1.73
 TRAVEL TIME (MIN.) = 0.79 Tc (MIN.) = 7.36
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 858.00 = 1966.00 FEET.
******************
 FLOW PROCESS FROM NODE 857.00 TO NODE 858.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 7.36
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.974
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                                        Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                           0.20
                                  0.30
                                         1.00 69
                    В
 AGRICULTURAL POOR COVER
 "FALLOW"
                          0.50 0.20
                                        1.00 94
                    D
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE" D 0.10 0.20
                                        0.50 75
 NATURAL FAIR COVER
                    D
                          2.80
                                0.20 1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.99
 SUBAREA AREA(ACRES) = 3.60 SUBAREA RUNOFF(CFS) = 15.46
 EFFECTIVE AREA(ACRES) = 20.10 AREA-AVERAGED Fm(INCH/HR) = 0.14
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.69
 TOTAL AREA(ACRES) = 20.10
                          PEAK FLOW RATE(CFS) =
*******************
 FLOW PROCESS FROM NODE 858.00 TO NODE 859.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 300.00 DOWNSTREAM(FEET) = 276.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 341.00 CHANNEL SLOPE = 0.0704
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 87.48
 FLOW VELOCITY (FEET/SEC.) = 10.26 FLOW DEPTH (FEET) = 1.78
 TRAVEL TIME (MIN.) = 0.55 Tc (MIN.) = 7.91
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 859.00 = 2307.00 FEET.
 FLOW PROCESS FROM NODE 858.00 TO NODE 859.00 IS CODE = 81
______
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>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 7.91
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.779
 SUBAREA LOSS RATE DATA (AMC II):
                                Fp
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                        Ap
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                    В
                          1.10
                                  0.30
                                        1.00
                                               69
 AGRICULTURAL POOR COVER
 "FALLOW"
                    D
                          1.10
                                0.20
                                        1.00 94
 RESIDENTIAL
                    D 9.10 0.20
 "5-7 DWELLINGS/ACRE"
                                       0.50
 NATURAL FAIR COVER
                                0.20 1.00
 "GRASS"
                    D
                         4.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.70
 SUBAREA AREA(ACRES) = 15.30 SUBAREA RUNOFF(CFS) = 63.77
 EFFECTIVE AREA(ACRES) = 35.40 AREA-AVERAGED Fm(INCH/HR) = 0.14
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.69
TOTAL AREA(ACRES) = 35.40 PEAK FLOW RATE(CFS) = 147.71
*****
FLOW PROCESS FROM NODE 859.00 TO NODE 860.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
ELEVATION DATA: UPSTREAM(FEET) = 276.00 DOWNSTREAM(FEET) = 250.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 634.00 CHANNEL SLOPE = 0.0410
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 147.71
 FLOW VELOCITY (FEET/SEC.) = 9.62 FLOW DEPTH (FEET) = 2.70
 TRAVEL TIME (MIN.) = 1.10 Tc (MIN.) = 9.01
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 860.00 = 2941.00 FEET.
FLOW PROCESS FROM NODE 859.00 TO NODE 860.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 9.01
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.453
SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                       Ap SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 AGRICULTURAL POOR COVER
 "FALLOW"
                    В
                           0.60
                                  0.30
                                         1.00
                                               86
 NATURAL FAIR COVER
 "GRASS"
                          1.50 0.30
                                        1.00
                                               69
 AGRICULTURAL POOR COVER
 "FALLOW"
                          3.40 0.20
                                        1.00
                                               94
 RESIDENTIAL
 "5-7 DWELLINGS/ACRE"
                    D 3.40 0.20
                                         0.50 75
 NATURAL FAIR COVER
 "GRASS"
                    D
                         6.30 0.20 1.00 84
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.89
 SUBAREA AREA (ACRES) = 15.20 SUBAREA RUNOFF (CFS) = 58.30
 EFFECTIVE AREA(ACRES) = 50.60 AREA-AVERAGED Fm(INCH/HR) = 0.16
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.75
 TOTAL AREA(ACRES) = 50.60 PEAK FLOW RATE(CFS) = 195.65
FLOW PROCESS FROM NODE 860.00 TO NODE 861.00 IS CODE = 51
______
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>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 250.00 DOWNSTREAM(FEET) = 230.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 885.00 CHANNEL SLOPE = 0.0226
 CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 195.65
 FLOW VELOCITY (FEET/SEC.) = 8.24 FLOW DEPTH (FEET) = 3.27
 TRAVEL TIME (MIN.) = 1.79 Tc (MIN.) = 10.80
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 861.00 = 3826.00 FEET.
***********************
 FLOW PROCESS FROM NODE 860.00 TO NODE 861.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 10.80
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.000
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                  Fρ
                                         Дp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 AGRICULTURAL POOR COVER
 "FALLOW"
                          0.10
                                 0.30
                                          1.00 86
 NATURAL FAIR COVER
 "GRASS"
                    в 0.10
                                0.30
                                         1.00 69
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"
                    в 2.60
                                0.30
                                         0.20 56
 AGRICULTURAL POOR COVER
                        0.20
                                 0.20
                                          1.00 94
 "FALLOW"
                    D
 NATURAL FAIR COVER
 "GRASS"
                           2.30
                                  0.20
                                          1.00 84
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"
                    D
                          2.40
                                  0.20
                                         0.20 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.22
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.48
 SUBAREA AREA(ACRES) = 7.70 SUBAREA RUNOFF(CFS) = 26.99
 EFFECTIVE AREA(ACRES) = 58.30 AREA-AVERAGED Fm(INCH/HR) = 0.15
 AREA-AVERAGED Fp (INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.72
 TOTAL AREA(ACRES) = 58.30
                           PEAK FLOW RATE (CFS) =
                                              202.00
******************
 FLOW PROCESS FROM NODE 861.00 TO NODE 862.00 IS CODE = 31
______
 >>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<
 >>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 230.00 DOWNSTREAM(FEET) = 225.00
 FLOW LENGTH (FEET) = 83.00 MANNING'S N = 0.013
 DEPTH OF FLOW IN 42.0 INCH PIPE IS 30.1 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) = 27.39
 ESTIMATED PIPE DIAMETER (INCH) = 42.00
                               NUMBER OF PIPES = 1
 PIPE-FLOW(CFS) = 202.00
 PIPE TRAVEL TIME (MIN.) = 0.05 Tc (MIN.) = 10.85
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 862.00 = 3909.00 FEET.
******************
 FLOW PROCESS FROM NODE 861.00 TO NODE 862.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 10.85
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.990
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                  SCS SOIL AREA
                                         Αp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     LAND USE
 AGRICULTURAL POOR COVER
```

"FALLOW"	В	0.40	0.30	1.00	86	
RESIDENTIAL						
"11+ DWELLINGS/ACRE"	В	17.00	0.30	0.20	56	
AGRICULTURAL POOR COVER						
"FALLOW"	D	11.00	0.20	1.00	94	
RESIDENTIAL						
"5-7 DWELLINGS/ACRE"	D	59.60	0.20	0.50	75	
NATURAL FAIR COVER	Б	33.00	0.20	0.50	7.5	
WATORAL FAIR COVER	D	E CO	0.20	1 00	0.4	
	D	5.00	0.20	1.00	84	
RESIDENTIAL						
"11+ DWELLINGS/ACRE"	D	51.80	0.20	0.20	75	
SUBAREA AVERAGE PERVIOUS	LOSS RAT	E, Fp(INC	CH/HR) = 0.	21		
SUBAREA AVERAGE PERVIOUS .	AREA FRA	CTION, Ar	= 0.42			
SUBAREA AREA(ACRES) = 14	5.40	SUBARE	RUNOFF (CFS	) = 510.8	39	
EFFECTIVE AREA(ACRES) =	203 70	AREA-Z	VERAGED Fm (	TNCH/HR) =	= 0.10	
AREA-AVERAGED Fp(INCH/HR)					0.10	
TOTAL AREA (ACRES) = 20	2 70	י אושה הי	TOM DAME (CE	c\	710 25	
IOIAL AREA (ACRES) - 20	3.70	PLAN I	LOW RAIL (CF	3) –	112.33	
******						
FLOW PROCESS FROM NODE	862.00	TO NODE	863.00 IS	CODE = 5	51	
>>>>COMPUTE TRAPEZOIDAL	CHANNEL	FLOW<<<<				
>>>>TRAVELTIME THRU SUBA						
ELEVATION DATA: UPSTREAM(						
CHANNEL LENGTH THRU SUBAR	EA(FEET)	= 2196.	UU CHANNE	L SLOPE =	0.0273	
CHANNEL BASE (FEET) = 6						
MANNING'S FACTOR = 0.040	MAXIMU	JM DEPTH(E	EET) = 6.	00		
CHANNEL FLOW THRU SUBAREA	(CFS) =	712.35				
FLOW VELOCITY (FEET/SEC.)				= 5.20		
TDAMET TIME (MIN ) - 2 Q	0 Tc/M	ITNI \ — 1	3 01	3.20		
TRAVEL TIME(MIN.) = 2.9 LONGEST FLOWPATH FROM NOD	9 IC(M	1111.) - 1	.5.04	0 6105	^^ ====	
LONGEST FLOWPATH FROM NOD	E 850	0.00 TO NO	DE 863.U	0 = 6105	.00 FEET.	
******				*****	*****	
FLOW PROCESS FROM NODE	862.00	TO NODE	863.00 IS	CODE = 8	31	
FLOW PROCESS FROM NODE						
	TO MAINL	INE PEAK	FLOW<			
>>>>ADDITION OF SUBAREA	TO MAINL	INE PEAK	FLOW<			
>>>>ADDITION OF SUBAREA MAINLINE TC(MIN) = 13.84	TO MAINL	INE PEAK	FLOW<			
>>>>ADDITION OF SUBAREA  MAINLINE TC(MIN) = 13.84  * 100 YEAR RAINFALL INTEN	TO MAINL	INE PEAK	FLOW<			
>>>>ADDITION OF SUBAREA MAINLINE TC (MIN) = 13.84 * 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM	TO MAINL ======  SITY(INC C II):	INE PEAK ======== CH/HR) =	FLOW<<<<	======		
>>>>ADDITION OF SUBAREA  MAINLINE Tc (MIN) = 13.84  * 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ S	TO MAINL ====== SITY(INC C II): CS SOIL	JINE PEAK CH/HR) = AREA	FLOW<<<< 3.467		SCS	
>>>>ADDITION OF SUBAREA MAINLINE TC (MIN) = 13.84 * 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM	TO MAINL ====== SITY(INC C II): CS SOIL	JINE PEAK CH/HR) = AREA	FLOW<<<< 3.467		SCS	
>>>>ADDITION OF SUBAREA  **********************************	TO MAINL ======= SITY(INC C II): CS SOIL GROUP	INE PEAK	FLOW<<<< 3.467  Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	
>>>>ADDITION OF SUBAREA  **********************************	TO MAINL ======= SITY(INC C II): CS SOIL GROUP	INE PEAK	FLOW<<<< 3.467  Fp (INCH/HR)	Ap (DECIMAL)	SCS CN	
>>>>ADDITION OF SUBAREA  ***MAINLINE TC (MIN) = 13.84  * 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "11+ DWELLINGS/ACRE"	TO MAINI SITY(INC II): CS SOIL GROUP A	EH/HR) =  AREA (ACRES)  6.50	FLOW<<<< 3.467 Fp (INCH/HR) 0.40	Ap (DECIMAL)	SCS CN	
>>>>ADDITION OF SUBAREA  ***MAINLINE TC (MIN) = 13.84  * 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "11+ DWELLINGS/ACRE"	TO MAINI SITY(INC II): CS SOIL GROUP A	EH/HR) =  AREA (ACRES)  6.50	FLOW<<<< 3.467 Fp (INCH/HR) 0.40	Ap (DECIMAL)	SCS CN	
>>>>ADDITION OF SUBAREA ( ====================================	TO MAINI SITY(INC II): CS SOIL GROUP A	EH/HR) =  AREA (ACRES)  6.50	FLOW<<<< 3.467 Fp (INCH/HR) 0.40	Ap (DECIMAL)	SCS CN	
>>>>ADDITION OF SUBAREA (	TO MAINI  SITY(INC C II): CS SOIL GROUP  A B	EH/HR) =  AREA (ACRES)  6.50  0.10	FLOW<><<< 3.467 Fp (INCH/HR) 0.40 0.30	Ap (DECIMAL) 0.20 1.00	SCS CN 32	
>>>>ADDITION OF SUBAREA (	TO MAINI  SITY(INC C II): CS SOIL GROUP  A B	EH/HR) =  AREA (ACRES)  6.50  0.10	FLOW<><<< 3.467 Fp (INCH/HR) 0.40 0.30	Ap (DECIMAL) 0.20 1.00	SCS CN 32	
>>>>ADDITION OF SUBAREA  MAINLINE TC (MIN) = 13.84  * 100 YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "11+ DWELLINGS/ACRE" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND"	TO MAINI  SITY(INC C II): CS SOIL GROUP  A B	EH/HR) =  AREA (ACRES)  6.50  0.10	FLOW<><<< 3.467 Fp (INCH/HR) 0.40 0.30	Ap (DECIMAL) 0.20 1.00	SCS CN 32	
>>>>ADDITION OF SUBAREA  ***TON YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA(AM DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "11+ DWELLINGS/ACRE" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL	TO MAINL SITY(INC C II): CS SOIL GROUP A B B	TINE PEAK CH/HR) = AREA (ACRES) 6.50 0.10 57.20	FLOW<<<< 3 3.467  Fp (INCH/HR)  0.40  0.30  0.30	Ap (DECIMAL) 0.20 1.00 0.20	SCS CN 32 69	
>>>>ADDITION OF SUBAREA ( ====================================	TO MAINL SITY(INC C II): CS SOIL GROUP A B B	TINE PEAK CH/HR) = AREA (ACRES) 6.50 0.10 57.20	FLOW<<<< 3 3.467  Fp (INCH/HR)  0.40  0.30  0.30	Ap (DECIMAL) 0.20 1.00 0.20	SCS CN 32 69	
>>>>ADDITION OF SUBAREA  ***TON YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "11+ DWELLINGS/ACRE" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL "5-7 DWELLINGS/ACRE" NATURAL FAIR COVER	TO MAINI  SITY(INC C II): CS SOIL GROUP  A  B  B	TINE PEAK CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50	FLOW<<<<> 3.467  Fp (INCH/HR)  0.40  0.30  0.30  0.20	Ap (DECIMAL) 0.20 1.00 0.20 0.50	SCS CN 32 69 56	
>>>>ADDITION OF SUBAREA  ***TON YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "11+ DWELLINGS/ACRE" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL "5-7 DWELLINGS/ACRE" NATURAL FAIR COVER "GRASS"	TO MAINI  SITY(INC C II): CS SOIL GROUP  A  B  B	TINE PEAK CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50	FLOW<<<< 3 3.467  Fp (INCH/HR)  0.40  0.30  0.30	Ap (DECIMAL) 0.20 1.00 0.20 0.50	SCS CN 32 69 56	
>>>>ADDITION OF SUBAREA ( ====================================	TO MAINL  SITY(INC C II): CS SOIL GROUP  A  B  D  D	TINE PEAK CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70	FLOW<<<<> 3.467  Fp (INCH/HR)  0.40  0.30  0.30  0.20  0.20	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00	SCS CN 32 69 56 75	
>>>>ADDITION OF SUBAREA  ***TON YEAR RAINFALL INTEN SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ LAND USE RESIDENTIAL "11+ DWELLINGS/ACRE" AGRICULTURAL FAIR COVER "PASTURE, DRYLAND" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL "11+ DWELLINGS/ACRE" RESIDENTIAL "5-7 DWELLINGS/ACRE" NATURAL FAIR COVER "GRASS"	TO MAINL  SITY(INC C II): CS SOIL GROUP  A  B  D  D	TINE PEAK CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70	FLOW<<<<> 3.467  Fp (INCH/HR)  0.40  0.30  0.30  0.20  0.20	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00	SCS CN 32 69 56 75	
>>>>ADDITION OF SUBAREA  ***MAINLINE TC (MIN) = 13.84  ***100 YEAR RAINFALL INTEN  SUBAREA LOSS RATE DATA (AM  DEVELOPMENT TYPE/ S'  LAND USE  RESIDENTIAL  "11+ DWELLINGS/ACRE"  AGRICULTURAL FAIR COVER  "PASTURE, DRYLAND"  RESIDENTIAL  "11+ DWELLINGS/ACRE"  RESIDENTIAL  "5-7 DWELLINGS/ACRE"  NATURAL FAIR COVER  "GRASS"  RESIDENTIAL  "11+ DWELLINGS/ACRE"  NATURAL FAIR COVER  "GRASS"  RESIDENTIAL  "11+ DWELLINGS/ACRE"	TO MAINL SITY(INC C II): CS SOIL GROUP A B D D	TINE PEAK CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10	FLOW<<<<> 3.467  Fp (INCH/HR)  0.40  0.30  0.30  0.20  0.20  0.20	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20	SCS CN 32 69 56 75	
>>>>ADDITION OF SUBAREA   ====================================	TO MAINL SITY(INC II): CS SOIL GROUP A B D D LOSS RAT AREA FRA	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  CE, FP(INC	FLOW<<<<	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23	SCS CN 32 69 56 75 84	
>>>>ADDITION OF SUBAREA   ====================================	TO MAINL SITY(INC II): CS SOIL GROUP A B D D LOSS RAT AREA FRA	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  CE, FP(INC	FLOW<<<<	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23	SCS CN 32 69 56 75 84	
>>>>ADDITION OF SUBAREA   ====================================	TO MAINL SITY(INC II): CS SOIL GROUP A B D D LOSS RAT AREA FRA	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  CE, FP(INC	FLOW<<<<	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23	SCS CN 32 69 56 75 84	
>>>>ADDITION OF SUBAREA SET SUBAREA SU	TO MAINL  SITY(INC C II): CS SOIL GROUP  A  B  D  D  LOSS RAT AREA FRA 2.10 355.80	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  CTION, Ag SUBAREA AREA-7	FLOW<<<< 3.467  Fp (INCH/HR)  0.40  0.30  0.20  0.20  0.20  0.4/HR) = 0.00  1.20  2.4 (HR) = 0.00  2.5 (HR) = 0.00  3.5 (HR) = 0.00  3.6 (HR) = 0.00  3.7 (HR) = 0.00  3.8 (HR) = 0.00  3.9 (HR) = 0.00  3.9 (HR) = 0.00  3.0 (HR) = 0.00  3.0 (HR) = 0.00  4.0 (HR) = 0.00  5.0 (HR) = 0.00  5.0 (HR) = 0.00  5.0 (HR) = 0.00  6.0 (HR)	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) =	SCS CN 32 69 56 75 84	
>>>>ADDITION OF SUBAREA ( ====================================	TO MAINI =======  SITY(INC C II): CS SOIL GROUP  A  B  D  D  LOSS RAT AREA FRA 2.10 355.80 = 0.21	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  TE, Fp(INC CCTION, AR SUBAREA- AREA-AL AREA-AL	FLOW<<<< =================================	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) = 0.42	SCS CN 32 69 56 75 84 75	
>>>>ADDITION OF SUBAREA SET SUBAREA SUBAREA SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = 15 EFFECTIVE ARRINFAL SET SUBAREA AREA (ACRES) = 15 SEFFECTIVE ARAINFAL SET SUBAREA AREA (ACRES) = 15 SEFFECTIVE AREA SUBAREA SET	TO MAINI =======  SITY(INC C II): CS SOIL GROUP  A  B  D  D  LOSS RAT AREA FRA 2.10 355.80 = 0.21	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  TE, Fp(INC CCTION, AR SUBAREA- AREA-AL AREA-AL	FLOW<<<< =================================	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) = 0.42	SCS CN 32 69 56 75 84 75	
>>>>ADDITION OF SUBAREA   ====================================	TO MAINL  SITY(INC C II): CS SOIL GROUP  A B D D LOSS RAT AREA FRA 2.10 355.80 = 0.21	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  CE, FP(INC CCTION, AR SUBAREA AREA-AL PEAK F	FLOW<<<< =================================	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) = 0.42 S) = 10	SCS CN 32 69 56 75 84 75	
>>>>ADDITION OF SUBAREA ( ====================================	TO MAINL  SITY(INC C II): CS SOIL GROUP  A B D D LOSS RAT AREA FRA 2.10 355.80 = 0.21	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  CE, FP(INC CCTION, AR SUBAREA AREA-AL PEAK F	FLOW<<<< =================================	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) = 0.42 S) = 10	SCS CN 32 69 56 75 84 75	
>>>>ADDITION OF SUBAREA   ====================================	TO MAINL  SITY(INC C II): CS SOIL GROUP  A B D D LOSS RAT AREA FRA 2.10 355.80 = 0.21 5.80	TINE PEAK  CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  CCTION, AF SUBAREZ AREA-A PEAK F	FLOW<<<< =================================	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) = 0.42 S) = 10	SCS CN 32 69 56 75 84 75	
>>>>ADDITION OF SUBAREA SET INTERPRETARIA SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ SET LAND USE RESIDENTIAL SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ SET LAND USE RESIDENTIAL SUBAREA LOSS RATE DATA (AM DEVELOPMENT TYPE/ SET LAND USE RESIDENTIAL SUBAREA LOSS RATE DATA (ACRE PASTURE, DRYLAND" RESIDENTIAL SUBAREA LOSS RESIDENTIAL SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AVERAGE PERVIOUS SUBAREA AREA (ACRES) = 15 EFFECTIVE AREA (ACRES) = 15 EFFECTIVE AREA (ACRES) = 35	TO MAINI =======  SITY(INC C II): CS SOIL GROUP  A  B  D  D  LOSS RAT AREA FRA 2.10 355.80 = 0.21 5.80  ********	TINE PEAK	FLOW<-<-> FLOW<-<-> FLOW<-<-> FLOW<-<-> FP  (INCH/HR)  0.40  0.30  0.30  0.20  0.20  0.20  0.20  0.20  CH/HR) = 0. CH/HR) = 0. CH/HR) = 0. CH/HR = 0. CH/H	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) = 0.42 S) = 10	SCS CN 32 69 56 75 84 75 86 = 0.09 081.32	
>>>>ADDITION OF SUBAREA ( ====================================	TO MAINI =======  SITY(INC C II): CS SOIL GROUP  A  B  D  D  LOSS RAT AREA FRA 2.10 355.80 = 0.21 5.80	CH/HR) =  AREA (ACRES)  6.50  0.10  57.20  23.50  11.70  53.10  E, Fp(INC CCTION, AF SUBAREA AREA-A PEAK F	FLOW<<<< =================================	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) = 0.42 S) = 10	SCS CN 32 69 56 75 84 75 86 = 0.09 081.32	
>>>>ADDITION OF SUBAREA ( ====================================	TO MAINI  SITY(INC C II): CS SOIL GROUP  A  B  D  D  LOSS RAT AREA FRA 2.10 355.80 = 0.21 5.80  ********** 862.00 TO MAINI	EH/HR) =  AREA (ACRES) 6.50 0.10 57.20 23.50 11.70 53.10 E, Fp(INC ECTION, AS SUBAREA AREA-A AREA-A TO NODE JINE PEAK	FLOW<<<< 3.467  Fp (INCH/HR)  0.40  0.30  0.30  0.20  0.20  0.20  0.20  EH/HR) = 0. EH/HR) = 0. EH/HR = 0. EH/	Ap (DECIMAL) 0.20 1.00 0.20 0.50 1.00 0.20 23 ) = 464.8 INCH/HR) = 0.42 S) = 10 ************************************	SCS CN 32 69 56 75 84 75	

```
MAINLINE Tc(MIN) = 13.84
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.467
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fρ
                                        Αp
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "CHAPARRAL, BROADLEAF"
                          4.90
                                0.20
                                        1.00 81
 NATURAL FAIR COVER
 "WOODT,AND"
                    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) = 5.10 SUBAREA RUNOFF(CFS) = 14.99
 EFFECTIVE AREA(ACRES) = 360.90 AREA-AVERAGED Fm(INCH/HR) = 0.09
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.43
 TOTAL AREA(ACRES) = 360.90
                        PEAK FLOW RATE(CFS) = 1096.31
************
 FLOW PROCESS FROM NODE 863.00 TO NODE 864.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 165.00 DOWNSTREAM(FEET) = 154.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1172.00 CHANNEL SLOPE = 0.0094
 CHANNEL BASE (FEET) = 8.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 8.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1096.31
 FLOW VELOCITY (FEET/SEC.) = 9.13 FLOW DEPTH (FEET) = 7.66
 TRAVEL TIME (MIN.) = 2.14 Tc (MIN.) = 15.98
 LONGEST FLOWPATH FROM NODE 850.00 TO NODE 864.00 = 7277.00 FEET.
********************
 FLOW PROCESS FROM NODE 863.00 TO NODE 864.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 15.98
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.190
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fρ
                                         Αp
                                               SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 COMMERCIAL
                    В
                          0.40
                                   0.30
                                          0.10 56
 RESIDENTIAL.
 "11+ DWELLINGS/ACRE"
                   В
                          0.10
                                   0.30
                                          0.20
                                                56
 NATURAL FAIR COVER
 "WOODLAND"
                                0.30
                    B
                          0.20
                                         1.00 60
 URBAN FAIR COVER
 "TURF"
                          1.20 0.20
                                        1.00 82
 NATURAL FAIR COVER
                          0.20 0.20 1.00 83
 "OPEN BRUSH"
                    D
                          0.90
                                0.20 0.10 75
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.21
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.58
 SUBAREA AREA(ACRES) = 3.00 SUBAREA RUNOFF(CFS) = 8.28
 EFFECTIVE AREA(ACRES) = 363.90 AREA-AVERAGED Fm(INCH/HR) = 0.09
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.43
 TOTAL AREA(ACRES) = 363.90 PEAK FLOW RATE(CFS) = 1096.31
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
********************
 FLOW PROCESS FROM NODE 863.00 TO NODE 864.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 15.98
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 3.190
 SUBAREA LOSS RATE DATA(AMC II):
```

```
SCS SOIL AREA
  DEVELOPMENT TYPE/
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
     TAND HISE
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"
                     D
                              5.30
                                      0.20
                                             0.20
 NATURAL FAIR COVER
                      D
                            4.60 0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.57
 SUBAREA AREA(ACRES) = 9.90 SUBAREA RUNOFF(CFS) = 27.41
 EFFECTIVE AREA(ACRES) = 373.80 AREA-AVERAGED Fm(INCH/HR) = 0.09
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.43
 TOTAL AREA(ACRES) = 373.80 PEAK FLOW RATE(CFS) = 1096.31
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 864.00 TO NODE 864.00 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.) = 15.98
 RAINFALL INTENSITY (INCH/HR) = 3.19
 AREA-AVERAGED Fm(INCH/HR) = 0.09
 AREA-AVERAGED Fp (INCH/HR) = 0.21
 AREA-AVERAGED Ap = 0.43
 EFFECTIVE STREAM AREA(ACRES) = 373.80
 TOTAL STREAM AREA(ACRES) = 373.80
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 1096.31
 ** CONFLUENCE DATA **
 STREAM
        0
                Tc
                        AREA
                                HEADWATER
 NUMBER
         (CFS)
               (MIN.) (ACRES)
                                 3100.00
  1
         4748.70 75.55
                        5527.70
         1096.31 15.98
                        373.80
                                  850.00
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 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.) = 16.0%; VALLEY(UNDEV.) / DESERT= 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.26; LAG(HR) = 1.01; Fm(INCH/HR) = 0.22; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL (MIN) = 10.00 TOTAL AREA (ACRES) = 5901.50
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 864.00 = 47356.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0309; Lca/L=0.4,n=.0277; Lca/L=0.5,n=.0254; Lca/L=0.6,n=.0237
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1772.69
 PEAK FLOW RATE(CFS) = 4083.69
  (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4748.70)
 PEAK FLOW RATE (CFS) USED = 4748.70
*******************
 FLOW PROCESS FROM NODE 864.00 TO NODE 884.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 154.00 DOWNSTREAM(FEET) = 135.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 6117.00 CHANNEL SLOPE = 0.0031
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4748.70
 FLOW VELOCITY (FEET/SEC.) = 8.24 FLOW DEPTH (FEET) = 5.95
 TRAVEL TIME (MIN.) = 12.37 Tc (MIN.) = 87.92
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LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
******************************
 FLOW PROCESS FROM NODE 864.00 TO NODE 884.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 87.92
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.197
 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
                              1.30
                                      0.40
                                               1.00
 AGRICULTURAL POOR COVER
 "FALLOW"
                              0.30
                                      0.40
                                               1.00
                                                     77
 NATURAL FAIR COVER
 "GRASS"
                             0.10
                                      0 40
                                              1 00
                                                     5.0
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                       A
                            0.10 0.40
                                            1 00 44
 COMMERCIAL
                            8.50 0.40 0.10 32
                       A
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                      A
                            1.00
                                    0.40 1.00 49
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.32
 SUBAREA AREA(ACRES) = 11.30
 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.) = 16.0%; VALLEY(UNDEV.)/DESERT= 8.0%
       MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.22; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 5912.80
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0321; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265; Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1776.50
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3843.56
 TOTAL AREA(ACRES) = 5912.80 PEAK FLOW RATE(CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*****
 FLOW PROCESS FROM NODE 864.00 TO NODE 884.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
______
 MAINLINE Tc(MIN) = 87.92
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.197
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                   Fρ
                                             Aρ
     LAND USE
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                              0.30
                                      0.40
                                               0.60
                                                     32
 NATURAL FAIR COVER
                              2 80
                                               1.00
 "WOODLAND"
                       A
                                      0 40
                                                     36
 AGRICULTURAL POOR COVER
                              0.10
 "FAT.LOW"
                       B
                                      0.30
                                               1 00
                                                    8.6
 NATURAL FAIR COVER
 "GRASS"
                             0.20
                                      0.30
                                              1.00 69
                       В
 AGRICULTURAL FAIR COVER
 "ORCHARDS"
                       В
                             0.20
                                      0.30
                                              1.00
 COMMERCIAL
                       В
                             11.80
                                      0.30
                                             0.10 56
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.36
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.30
 SUBAREA AREA(ACRES) = 15.40
```

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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.) = 16.0%; VALLEY(UNDEV.) / DESERT = 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.)= 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.22; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL (MIN) = 10.00 TOTAL AREA (ACRES) = 5928.20
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0321; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265; Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1781.84
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3853.43
 TOTAL AREA(ACRES) = 5928.20
                            PEAK FLOW RATE (CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 864.00 TO NODE 884.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
MAINLINE Tc (MIN) = 87.92
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 1.197
 SUBAREA LOSS RATE DATA(AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
 "GRASS"
                                    0.20
                       D
                              1 10
                                              1.00
                                                     84
 AGRICULTURAL FAIR COVER
                                    0.20
 "ORCHARDS"
                       D
                              0.40
                                              1 00
                              1.40
 COMMERCIAL
                       D
                                    0.20
                                             0.10
 NATURAL FAIR COVER
 "WOODLAND"
                       D
                              3.90
                                    0.20
                                            1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.81
 SUBAREA AREA(ACRES) = 6.80
 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.) = 16.0%; VALLEY(UNDEV.) / DESERT= 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.22; Ybar = 0.40
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.76; 30M = 0.76; 1HR = 0.76;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL (MIN) = 10.00 TOTAL AREA (ACRES) = 5935.00
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
  EOUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3,n=.0321; Lca/L=0.4,n=.0288; Lca/L=0.5,n=.0265; Lca/L=0.6,n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 1784.06
 UNIT-HYDROGRAPH PEAK FLOW RATE(CFS) = 3857.50
 TOTAL AREA(ACRES) = 5935.00 PEAK FLOW RATE(CFS) = 4748.70
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
*******************
 FLOW PROCESS FROM NODE 884.00 TO NODE 884.00 IS CODE = 1
______
 >>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE <<<<
______
 TOTAL NUMBER OF STREAMS = 2
 CONFIGURACE VALUES USED FOR INDEPENDENT STREAM 1 ARE:
 PEAK FLOW RATE (CFS) = 4748.70 Tc (MIN.) = 87.92
 AREA-AVERAGED Fm(INCH/HR) = 0.22 Ybar = 0.40
 TOTAL AREA(ACRES) = 5935.00
********************
 FLOW PROCESS FROM NODE 870.00 TO NODE 871.00 IS CODE = 21
```

```
>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS
 >>USE TIME-OF-CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA<<
 INITIAL SUBAREA FLOW-LENGTH (FEET) = 257.00
 ELEVATION DATA: UPSTREAM(FEET) = 1123.00 DOWNSTREAM(FEET) = 1075.00
 Tc = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]**0.20
 SUBAREA ANALYSIS USED MINIMUM Tc(MIN.) = 9.089
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.430
 SUBAREA To AND LOSS RATE DATA (AMC II):
  DEVELOPMENT TYPE/ SCS SOIL AREA
                                          Ap SCS Tc
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN (MIN.)
 NATURAL FAIR COVER
                     D 0.60
                                  0.20 1.00 84 9.09
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA RUNOFF(CFS) = 2.28
 TOTAL AREA(ACRES) = 0.60 PEAK FLOW RATE(CFS) = 2.28
*****
 FLOW PROCESS FROM NODE 871.00 TO NODE 872.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
_____
 ELEVATION DATA: UPSTREAM(FEET) = 1075.00 DOWNSTREAM(FEET) = 1025.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 160.00 CHANNEL SLOPE = 0.3125
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 2.28
 FLOW VELOCITY (FEET/SEC.) = 6.90 FLOW DEPTH (FEET) = 0.26
 TRAVEL TIME (MIN.) = 0.39 Tc (MIN.) = 9.48
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 872.00 = 417.00 FEET.
******************
 FLOW PROCESS FROM NODE 871.00 TO NODE 872.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINI.INE. Tc (MIN) = 9.48
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.315
 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
                    D 0.80 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) = 0.80 SUBAREA RUNOFF(CFS) = 2.96
 EFFECTIVE AREA(ACRES) = 1.40 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 1.40 PEAK FLOW RATE(CFS) = 5.19
******************
 FLOW PROCESS FROM NODE 872.00 TO NODE 873.00 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) = 89.00 CHANNEL SLOPE = 0.2809
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 5.19
 FLOW VELOCITY (FEET/SEC.) = 8.38 FLOW DEPTH (FEET) = 0.43
 TRAVEL TIME (MIN.) = 0.18 Tc (MIN.) = 9.65
```

```
LONGEST FLOWPATH FROM NODE 870.00 TO NODE 873.00 = 506.00 FEET.
*******************
FLOW PROCESS FROM NODE 872.00 TO NODE 873.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 9.65
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.263
 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
                    D 0.70 0.20 1.00 84
 "GRASS"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 0.70 SUBAREA RUNOFF(CFS) = 2.56
 EFFECTIVE AREA(ACRES) = 2.10 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 2.10 PEAK FLOW RATE(CFS) =
FLOW PROCESS FROM NODE 873.00 TO NODE 874.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 1000.00 DOWNSTREAM(FEET) = 980.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 61.00 CHANNEL SLOPE = 0.3279
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH(FEET) = 1.00
 CHANNEL FLOW THRU SUBAREA(CFS) =
                          7.68
 FLOW VELOCITY (FEET/SEC.) = 9.87 FLOW DEPTH (FEET) = 0.51
 TRAVEL TIME (MIN.) = 0.10 Tc (MIN.) = 9.76
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 874.00 = 567.00 FEET.
*****
FLOW PROCESS FROM NODE 873.00 TO NODE 874.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
______
 MAINLINE Tc (MIN) = 9.76
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.232
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
  LAND USE
 NATURAL FAIR COVER
 "GRASS"
                    D 2.00 0.20 1.00 84
 NATURAL FAIR COVER
                    D 0.30
                                0.20 1.00 83
 "OPEN BRUSH"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
                         SUBAREA RUNOFF(CFS) = 8.35
 SUBAREA AREA(ACRES) = 2.30
 EFFECTIVE AREA(ACRES) = 4.40 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 4.40 PEAK FLOW RATE (CFS) =
******************
 FLOW PROCESS FROM NODE 874.00 TO NODE 875.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 980.00 DOWNSTREAM(FEET) = 950.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 179.00 CHANNEL SLOPE = 0.1676
 CHANNEL BASE (FEET) = 1.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 1.00
```

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CHANNEL FLOW THRU SUBAREA(CFS) =
                          15.97
 FLOW VELOCITY (FEET/SEC.) = 9.38 FLOW DEPTH (FEET) = 0.90
 TRAVEL TIME (MIN.) = 0.32 Tc (MIN.) = 10.07
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 875.00 = 746.00 FEET.
FLOW PROCESS FROM NODE 874.00 TO NODE 875.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINI.INE Tc(MIN) = 10.07
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.145
 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 1.00 0.20 1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                   D 0.80 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) = 1.80 SUBAREA RUNOFF(CFS) = 6.39
 EFFECTIVE AREA(ACRES) = 6.20 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 1.00
 TOTAL AREA(ACRES) = 6.20 PEAK FLOW RATE(CFS) = 22.01
********************
 FLOW PROCESS FROM NODE 875.00 TO NODE 876.00 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) = 146.00 CHANNEL SLOPE = 0.1712
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 22.01
 FLOW VELOCITY (FEET/SEC.) = 9.98 FLOW DEPTH (FEET) = 0.79
 TRAVEL TIME (MIN.) = 0.24 Tc (MIN.) = 10.32
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 876.00 = 892.00 FEET.
*******************
 FLOW PROCESS FROM NODE 875.00 TO NODE 876.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc(MIN) = 10.32
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 4.096
 SUBAREA LOSS RATE DATA(AMC II):
               SCS SOIL AREA
 DEVELOPMENT TYPE/
                              Fp Ap SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                   D 0.60
                               0.20
                                      1.00 84
 NATURAL FAIR COVER
                   D 1.70 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) = 2.30 SUBAREA RUNOFF(CFS) = 8.07
 EFFECTIVE AREA(ACRES) = 8.50 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 1.00
 TOTAL AREA (ACRES) = 8.50 PEAK FLOW RATE (CFS) = 29.81
*****
 FLOW PROCESS FROM NODE 876.00 TO NODE 877.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
```

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______
 ELEVATION DATA: UPSTREAM(FEET) = 925.00 DOWNSTREAM(FEET) = 905.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 144.00 CHANNEL SLOPE = 0.1389
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 29.81
 FLOW VELOCITY (FEET/SEC.) = 10.01 FLOW DEPTH (FEET) = 0.99
 TRAVEL TIME (MIN.) = 0.24 Tc (MIN.) = 10.56
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 877.00 = 1036.00 FEET.
******************
 FLOW PROCESS FROM NODE 876.00 TO NODE 877.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 10.56
* 100 YEAR RAINFALL INTENSITY (INCH/HR) = 4.049
 SUBAREA LOSS RATE DATA(AMC II):
                                       Ap
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                 Fp
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
                          0.30
                                  0.20
                                        1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                         0.90 0.20 1.00 83
 RESIDENTIAL
 "11+ DWELLINGS/ACRE" D 1.30 0.20 0.20 75
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.58
 SUBAREA AREA(ACRES) = 2.50 SUBAREA RUNOFF(CFS) = 8.85
 EFFECTIVE AREA(ACRES) = 11.00 AREA-AVERAGED Fm(INCH/HR) = 0.18
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.91
                        PEAK FLOW RATE(CFS) =
 TOTAL AREA(ACRES) = 11.00
******************
 FLOW PROCESS FROM NODE 877.00 TO NODE 878.00 IS CODE = 51
______
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 905.00 DOWNSTREAM(FEET) = 860.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 803.00 CHANNEL SLOPE = 0.0560
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 38.29
 FLOW VELOCITY (FEET/SEC.) = 7.69 FLOW DEPTH (FEET) = 1.44
 TRAVEL TIME (MIN.) = 1.74 Tc (MIN.) = 12.30
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 878.00 = 1839.00 FEET.
*******************
 FLOW PROCESS FROM NODE 877.00 TO NODE 878.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 12.30
* 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.701
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                       Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
  LAND USE
 NATURAL FAIR COVER
 "GRASS"
                    D
                          2 50
                                  0.20
                                         1 00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          6.20
                                 0.20
                                         1.00 83
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"
                    D
                          4.30
                                  0.20
                                         0.20
                                               75
 NATURAL FAIR COVER
                                0.20 1.00 79
 "WOODT.AND"
                    D
                          0.40
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
```

```
SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.74
 SUBAREA AREA (ACRES) = 13.40 SUBAREA RUNOFF (CFS) = 42.84
 EFFECTIVE AREA(ACRES) = 24.40 AREA-AVERAGED Fm(INCH/HR) = 0.16
 AREA-AVERAGED Fp (INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.82
 TOTAL AREA(ACRES) =
                           PEAK FLOW RATE(CFS) =
                                                77.68
                 24.40
******************
 FLOW PROCESS FROM NODE 878.00 TO NODE 879.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
_____
 ELEVATION DATA: UPSTREAM(FEET) = 860.00 DOWNSTREAM(FEET) = 755.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 1104.00 CHANNEL SLOPE = 0.0951
 CHANNEL BASE (FEET) = 2.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 2.00
 CHANNEL FLOW THRU SUBAREA (CFS) = 77.68
 FLOW VELOCITY (FEET/SEC.) = 11.24 FLOW DEPTH (FEET) = 1.81
 TRAVEL TIME (MIN.) = 1.64 Tc (MIN.) = 13.93
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 879.00 = 2943.00 FEET.
******************
 FLOW PROCESS FROM NODE 878.00 TO NODE 879.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
_____
 MAINLINE Tc (MIN) = 13.93
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 3.453
 SUBAREA LOSS RATE DATA(AMC II):
                                 Fp
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                          Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                          0.80
 "GRASS"
                     D
                                 0.20
                                           1.00 84
 NATURAL FAIR COVER
 "OPEN BRUSH"
                     D
                         10.40
                                 0.20
                                          1.00 83
 RESIDENTIAL
 "11+ DWELLINGS/ACRE"
                           5.40
                                 0.20
                                         0.20 75
                     D
 NATURAL FAIR COVER
 "WOODLAND"
                           2.90
                                  0.20
                                          1.00 79
                    D
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.78
 SUBAREA AREA(ACRES) = 19.50
                         SUBAREA RUNOFF(CFS) = 57.88
 EFFECTIVE AREA(ACRES) = 43.90 AREA-AVERAGED Fm(INCH/HR) = 0.16
 AREA-AVERAGED Fp(INCH/HR) = 0.20 AREA-AVERAGED Ap = 0.80
 TOTAL AREA(ACRES) = 43.90
                           PEAK FLOW RATE (CFS) = 130.13
******************
 FLOW PROCESS FROM NODE 879.00 TO NODE 880.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 755.00 DOWNSTREAM(FEET) = 533.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 1578.00 CHANNEL SLOPE = 0.1407
 CHANNEL BASE (FEET) = 3.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 3.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 130.13
 FLOW VELOCITY (FEET/SEC.) = 14.68 FLOW DEPTH (FEET) = 1.83
 TRAVEL TIME (MIN.) = 1.79 Tc (MIN.) = 15.73
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 880.00 = 4521.00 FEET.
********************
 FLOW PROCESS FROM NODE 879.00 TO NODE 880.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc(MIN) = 15.73
```

* 100 YEAR RAINFALL IN			3.219		
SUBAREA LOSS RATE DATA	(AMC II):	ADFA	Fn	Δn	909
DEVELOPMENT TYPE/ LAND USE NATURAL FAIR COVER	GROUP	(ACRES)	(INCH/HR)	(DECIMAL)	CN
NATURAL FAIR COVER	01.001	(1101120)	(211011) 1111)	(52021212)	011
"GRASS"	С	9.80	0.25	1.00	79
NATURAL FAIR COVER					
"OPEN BRUSH"	C	11.40	0.25	1.00	77
NATURAL FAIR COVER					
"WOODLAND"	C	1.10	0.25	1.00	73
NATURAL FAIR COVER					
"GRASS"	D	8.30	0.20	1.00	84
NATURAL FAIR COVER					
"OPEN BRUSH"	D	38.20	0.20	1.00	83
NATURAL FAIR COVER					
"WOODLAND"	D	8.70	0.20	1.00	79
SUBAREA AVERAGE PERVIOU				.21	
SUBAREA AVERAGE PERVIOU					
SUBAREA AREA(ACRES) =					
EFFECTIVE AREA(ACRES) =					= 0.19
AREA-AVERAGED Fp(INCH/					
TOTAL AREA(ACRES) =	121.40	PEAK I	FLOW RATE (C	FS) = :	330.40
******					
FLOW PROCESS FROM NODE					
>>>>COMPUTE TRAPEZOIDA					
>>>>TRAVELTIME THRU SU					
ELEVATION DATA: UPSTREA					
CHANNEL LENGTH THRU SUI				EL SLOPE =	0.0955
CHANNEL BASE (FEET) =				0.0	
MANNING'S FACTOR = 0.04				.00	
CHANNEL FLOW THRU SUBAR	REA(CFS) =				
DION UDIOCEMU (DDDM /CDC	1010			0.05	
FLOW VELOCITY (FEET/SEC		2 FLOW I	DEPTH (FEET)	= 2.95	
TRAVEL TIME (MIN.) =	1.28 Tc(N	2 FLOW I	DEPTH(FEET) 17.00		00 EEEE
	1.28 Tc(N	2 FLOW I	DEPTH(FEET) 17.00		.00 FEET.
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM 1	1.28 Tc(NODE 870	2 FLOW I MIN.) = 3 0.00 TO NO	DEPTH(FEET) 17.00 DDE 881.0	00 = 5757	
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM 1	1.28 Tc(NODE 870	2 FLOW I MIN.) = 3 0.00 TO NO	DEPTH(FEET) 17.00 DDE 881.	00 = 5757	****
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM 1  *************************** FLOW PROCESS FROM NODE	1.28 Tc(NODE 870	2 FLOW I MIN.) = 3 0.00 TO NO ***********************************	DEPTH(FEET) 17.00 DDE 881.0 ************************************	00 = 5757 **********************************	********* 81
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  ***********************************	1.28 Tc (NODE 870	2 FLOW I MIN.) = 3 0.00 TO NO *********** TO NODE	DEPTH(FEET) 17.00 DDE 881.0 ************************************	00 = 5757 **********************************	********* 81
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM 1  ************************** FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARI	1.28 Tc (NODE 870	2 FLOW I MIN.) = 3 0.00 TO NO ************************************	DEPTH (FEET) 17.00 DDE 881.0 *********** 881.00 I: FLOW<<<<	00 = 5757 **********************************	******* 81 
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM 1  ************************ FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARI	1.28 Tc(NODE 870	2 FLOW I MIN.) = 3 0.00 TO NO ************************************	DEPTH (FEET) 17.00 DDE 881.0 *********** 881.00 I: FLOW<<<<	00 = 5757 **********************************	******* 81 
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM 1  ****************** FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 17	1.28 Tc (NODE 870	2 FLOW I MIN.) = 1 0.00 TO NO ********* TO NODE	DEPTH(FEET) 17.00 DDE 881.0 *********  881.00 I:	00 = 5757 **********************************	******* 81 
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  ************************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARR  **********************************	1.28 Tc (NODE 870  *************  880.00  EA TO MAINI  .00  FENSITY (INC	2 FLOW I MIN.) = 1 0.00 TO NO ************************************	DEPTH(FEET) 17.00 DDE 881.0 *********  881.00 I:	00 = 5757 **********************************	******* 81 
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARI  MAINLINE TC (MIN) = 17 * 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 5 0.00 TO NO *********** TO NODE LINE PEAK	DEPTH(FEET) 17.00 DDE 881.0 *********** 881.00 I: FLOW<<<<	00 = 5757 **********************************	******* 81 
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM 1  **********************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARI  MAINLINE TC (MIN) = 17 * 100 YEAR RAINFALL INSUBAREA LOSS RATE DATA DEVELOPMENT TYPE/	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ************************************	DEPTH(FEET) 17.00 DDE 881.0  ***********  881.00 I:	00 = 5757 **********************************	*********** 81 
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARI  MAINLINE TC (MIN) = 17 * 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ************************************	DEPTH(FEET) 17.00 DDE 881.0  ***********  881.00 I:	00 = 5757 **********************************	*********** 81 
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  *********************  FLOW PROCESS FROM NODE  >>>>ADDITION OF SUBARE  MAINLINE TC (MIN) = 17 * 100 YEAR RAINFALL IN: SUBAREA LOSS RATE DATA DEVELOPMENT TYPE/ LAND USE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ******** TO NODE	DEPTH(FEET) 17.00 DDE 881.0  ***********  881.00 I:	D00 = 5757  ********  ********  ********  *******	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  *********************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ******** TO NODE	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 I:  FLOW<<<<  ================================	D00 = 5757  ********  ********  ********  *******	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  ********************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 3 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 I:  FLOW<<<<  ================================	D00 = 5757  *********  S CODE = :  Ap (DECIMAL)  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  ************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 3 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 IS  FLOW<<<<<  3.076  Fp (INCH/HR)  0.25	D00 = 5757  *********  S CODE = :  Ap (DECIMAL)  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  ************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 I:  FLOW<<<<  3.076  Fp (INCH/HR)  0.25  0.25	Ap (DECIMAL) 1.00 1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  ****************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 IS  FLOW<<<<<  3.076  Fp (INCH/HR)  0.25	Ap (DECIMAL) 1.00 1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  ************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 3 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 I:  FLOW<<<<  3.076  Fp (INCH/HR)  0.25  0.25	Ap (DECIMAL)  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  *********************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 3 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 IS   3.076  Fp (INCH/HR)  0.25  0.25  0.25	Ap (DECIMAL)  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  ************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ***********************************	DEPTH(FEET) 17.00 DDE 881.0 **********  881.00 IS  FLOW<<<<  INCH/HR)  0.25  0.25  0.20	Ap (DECIMAL)  1.00  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  *************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 IS   3.076  Fp (INCH/HR)  0.25  0.25  0.25	Ap (DECIMAL)  1.00  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  ****************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 I:  FLOW<<<< 3.076  Fp (INCH/HR)  0.25  0.25  0.25  0.20  0.20	Ap (DECIMAL)  1.00  1.00  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  **********************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ********** TO NODE 	DEPTH (FEET) 17.00 DDE 881.0  ********** 881.00 I: FLOW<<<<< 3.076  Fp (INCH/HR) 0.25 0.25 0.25 0.20 0.20 0.20	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  **********************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 3 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 IS  FILOW<<<<  3.076  Fp (INCH/HR)  0.25  0.25  0.25  0.20  0.20  0.20  CH/HR) = 0	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM NOTE  *************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ***********************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 I:  FLOW<<<<  3.076  Fp (INCH/HR)  0.25  0.25  0.25  0.20  0.20  CH/HR) = 0 p = 1.00	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  **********************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 .00 TO NO ************************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 I:  FLOW<<<< 3.076  Fp (INCH/HR)  0.25  0.25  0.25  0.20  0.20  0.20  CH/HR) = 0 p = 1.00 A RUNOFF (CFS	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  24  S) = 165.8	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  ***********************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 1 0.00 TO NO ************************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 I:  FLOW<<<< 3.076  Fp (INCH/HR)  0.25  0.25  0.25  0.20  0.20  CH/HR) = 0 0.20  CH/HR) = 0 0.21  A RUNOFF (CF:  AVERAGED FM	Ap (DECIMAL)  1.00  1.00  1.00  1.00  24  S) = 165.: (INCH/HR):	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  ************************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 2 0.00 TO NO ************************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 IS  *********  3.076  Fp (INCH/HR)  0.25  0.25  0.25  0.20  0.20  CH/HR) = 0 p = 1.00 A UNOFF (CF: A UPRAGED Ap :  VERAGED Ap :	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	**************************************
TRAVEL TIME (MIN.) = 1 LONGEST FLOWPATH FROM N  ***********************  FLOW PROCESS FROM NODE	1.28 Tc (NODE 870  ***********************************	2 FLOW I MIN.) = 2 0.00 TO NO ************************************	DEPTH (FEET) 17.00 DDE 881.0  **********  881.00 IS  *********  3.076  Fp (INCH/HR)  0.25  0.25  0.25  0.20  0.20  CH/HR) = 0 p = 1.00 A UNOFF (CF: A UPRAGED Ap :  VERAGED Ap :	Ap (DECIMAL)  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00	**************************************

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FLOW PROCESS FROM NODE 881.00 TO NODE 882.00 IS CODE = 51
>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <>>>
______
 ELEVATION DATA: UPSTREAM(FEET) = 415.00 DOWNSTREAM(FEET) = 190.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 2805.00 CHANNEL SLOPE = 0.0802
 CHANNEL BASE (FEET) = 4.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 4.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 480.59
 FLOW VELOCITY (FEET/SEC.) = 16.63 FLOW DEPTH (FEET) = 3.74
 TRAVEL TIME (MIN.) = 2.81 Tc (MIN.) = 19.82
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 882.00 = 8562.00 FEET.
*****
 FLOW PROCESS FROM NODE 881.00 TO NODE 882.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE To (MIN) = 19.82
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.816
 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
                        0.50
                                 0.30
 "GRASS"
                   B
                                       1.00 69
 NATURAL FAIR COVER
 "WOODLAND"
                               0.30
                   B
                        0.20
                                       1.00
                                             60
 NATURAL FAIR COVER
                        18.20
 "GRASS"
                   C
                                0.25
                                       1.00
 NATURAL FAIR COVER
 "OPEN BRUSH"
                       10.80
                               0.25
                                       1.00
                                             77
 NATURAL FAIR COVER
 "WOODLAND"
                   С
                        1.20
                               0.25
                                      1.00 73
 NATURAL FAIR COVER
                   D
                       36.30
                              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) = 67.20 SUBAREA RUNOFF(CFS) = 156.81
 EFFECTIVE AREA(ACRES) = 253.50 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 253.50
                        PEAK FLOW RATE(CFS) = 593.92
******************
FLOW PROCESS FROM NODE 881.00 TO NODE 882.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
-----
 MAINLINE Tc(MIN) = 19.82
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.816
 SUBAREA LOSS RATE DATA (AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                              Fp Ap
                 GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                              0.20 1.00 79
 "WOODT AND"
                   D 7.10
 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) = 16.72
 EFFECTIVE AREA(ACRES) = 260.60 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 260.60 PEAK FLOW RATE(CFS) = 610.64
*******************
 FLOW PROCESS FROM NODE 882.00 TO NODE 883.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
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>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 190.00 DOWNSTREAM(FEET) = 184.00
 CHANNEL LENGTH THRU SUBAREA (FEET) = 86.00 CHANNEL SLOPE = 0.0698
 CHANNEL BASE (FEET) = 5.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.040 MAXIMUM DEPTH (FEET) = 5.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 610.64
 FLOW VELOCITY (FEET/SEC.) = 16.72 FLOW DEPTH (FEET) = 4.04
 TRAVEL TIME (MIN.) = 0.09 Tc (MIN.) = 19.90
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 883.00 = 8648.00 FEET.
*****
 FLOW PROCESS FROM NODE 882.00 TO NODE 883.00 IS CODE = 81
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
_____
 MAINLINE Tc (MIN) = 19.90
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.809
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                Fp
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 NATURAL FAIR COVER
                          1.70
                                        1.00
                                  0.30
 COMMERCIAL
                    B
                         0.30
                                 0.30
                                       0.10
 NATURAL FAIR COVER
 "GRASS"
                         46.00
                                 0.25
                                         1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                                       1.00 77
                  C 20.20
                                0.25
 NATURAL FAIR COVER
 "WOODLAND"
                   С
                         4.40
                                0.25
                                       1.00 73
 NATURAL POOR COVER
                   D
 "BARREN"
                         0.40
                                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) = 73.00 SUBAREA RUNOFF(CFS) = 168.11
 EFFECTIVE AREA(ACRES) = 333.60 AREA-AVERAGED Fm(INCH/HR) = 0.22
 AREA-AVERAGED Fp(INCH/HR) = 0.23 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 333.60 PEAK FLOW RATE(CFS) =
FLOW PROCESS FROM NODE 882.00 TO NODE 883.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>>>
_____
 MAINLINE Tc(MIN) = 19.90
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.809
 SUBAREA LOSS RATE DATA(AMC II):
                               Fp Ap
 DEVELOPMENT TYPE/ SCS SOIL AREA
                                             SCS
    LAND USE
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
 "GRASS"
                         187.70
                                 0.20
                                         1.00
 NATURAL FAIR COVER
                  D
 "OPEN BRUSH"
                       94.40 0.20 1.00
                                               83
                         7.70 0.20 0.10
 COMMERCIAL
                    D
                                               7.5
 NATURAL FAIR COVER
 "WOODT AND"
                        7.90
                    D
                                0.20 1.00 79
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp (INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.98
 SUBAREA AREA(ACRES) = 297.70
                         SUBAREA RUNOFF(CFS) = 700.20
 EFFECTIVE AREA(ACRES) = 631.30 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.21 AREA-AVERAGED Ap = 0.97
 TOTAL AREA(ACRES) = 631.30 PEAK FLOW RATE(CFS) = 1477.18
*******************
 FLOW PROCESS FROM NODE 883.00 TO NODE 884.00 IS CODE = 51
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
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>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <<<<
______
 ELEVATION DATA: UPSTREAM(FEET) = 184.00 DOWNSTREAM(FEET) = 135.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 2633.00 CHANNEL SLOPE = 0.0186
 CHANNEL BASE (FEET) = 7.00 "Z" FACTOR = 1.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 7.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 1477.18
 FLOW VELOCITY (FEET/SEC.) = 15.79 FLOW DEPTH (FEET) = 6.79
 TRAVEL TIME (MIN.) = 2.78 Tc (MIN.) = 22.68
 LONGEST FLOWPATH FROM NODE 870.00 TO NODE 884.00 = 11281.00 FEET.
*****
 FLOW PROCESS FROM NODE 883.00 TO NODE 884.00 IS CODE = 81
._____
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 22.68
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.599
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                               Fp
                                        Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
    LAND USE
 NATURAL FAIR COVER
                           0.70
                                          1.00
 "GRASS"
                    A
                                  0.40
 COMMERCIAL
                          1.60
                                0.40
                                         0.10
                                               32
                    A
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                    A 0.60
                                  0.40
                                         1.00
                                               49
 RESIDENTIAL.
 "3-4 DWELLINGS/ACRE" A 30.70
                                0.40
                                         0.60 32
 NATURAL FAIR COVER
 "WOODLAND"
                          1.50
                                 0.40
                                        1.00 36
                    A
 NATURAL POOR COVER
 "BARREN"
                    В
                          2.00
                                 0.30
                                        1.00 86
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.39
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.63
 SUBAREA AREA(ACRES) = 37.10 SUBAREA RUNOFF(CFS) = 78.55
 EFFECTIVE AREA(ACRES) = 668.40 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.96
 TOTAL AREA(ACRES) = 668.40 PEAK FLOW RATE(CFS) = 1477.18
 NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE
FLOW PROCESS FROM NODE 883.00 TO NODE 884.00 IS CODE = 81
______
>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE To (MIN) = 22.68
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 2.599
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/
                SCS SOIL AREA
                                        Ap SCS
                                 Fρ
    LAND USE
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 COMMERCIAL
                    В
                          7.20
                                0.30
                                        0.10 56
 AGRICULTURAL FAIR COVER
 "PASTURE, DRYLAND"
                          1.10
                                  0.30
                                         1.00 69
 RESIDENTIAL
 "3-4 DWELLINGS/ACRE"
                                0.30
                    B 14.80
                                         0.60
                                               56
 NATURAL FAIR COVER
 "WOODLAND"
                    В
                         2.00
                                0.30
                                        1.00 60
 NATURAL FAIR COVER
 "GRASS"
                    C 23.10
                                  0.25
                                        1.00 79
 NATURAL FAIR COVER
 "OPEN BRUSH"
                          7.30
                                 0.25 1.00 77
                    C
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.26
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.78
 SUBAREA AREA(ACRES) = 55.50 SUBAREA RUNOFF(CFS) = 119.56
 EFFECTIVE AREA(ACRES) = 723.90 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.94
 TOTAL AREA (ACRES) = 723.90 PEAK FLOW RATE (CFS) = 1556.26
```

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********************
FLOW PROCESS FROM NODE 883.00 TO NODE 884.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<>
______
 MAINLINE To (MIN) = 22.68
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.599
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA
                               Fp
                                        Ap SCS
                   GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 COMMERCIAL
                   C
                          6.20 0.25
                                        0.10
 RESIDENTIAL
                           0.90
                                  0.25
 "3-4 DWELLINGS/ACRE"
                                          0.60
 NATURAL FAIR COVER
 "WOODLAND"
                           0.30
                                  0.25
                                          1.00
                                                7.3
 NATURAL POOR COVER
                    D
 "BARREN"
                          0.20
                                  0.20
                                         1.00
                                                93
 NATURAL FAIR COVER
 "GRASS"
                    D 21.80 0.20 1.00
                                                84
 NATURAL FAIR COVER
                   D 1.60 0.20 1.00 83
 "OPEN BRUSH"
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.20
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 0.81
 SUBAREA AREA(ACRES) = 31.00 SUBAREA RUNOFF(CFS) = 67.94
 EFFECTIVE AREA(ACRES) = 754.90 AREA-AVERAGED Fm(INCH/HR) = 0.21
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.94
 TOTAL AREA(ACRES) = 754.90 PEAK FLOW RATE(CFS) = 1624.20
.....
 FLOW PROCESS FROM NODE 883.00 TO NODE 884.00 IS CODE = 81
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
______
 MAINLINE Tc (MIN) = 22.68
 * 100 YEAR RAINFALL INTENSITY (INCH/HR) = 2.599
 SUBAREA LOSS RATE DATA(AMC II):
 DEVELOPMENT TYPE/ SCS SOIL AREA Fp
                                       Ap SCS
                  GROUP (ACRES) (INCH/HR) (DECIMAL) CN
   LAND USE
 COMMERCIAL
                   D 44.40 0.20
                                       0.10
 "3-4 DWELLINGS/ACRE" D 6.00 0.20
                                         0.60
                                              75
 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 = 0.18
 SUBAREA AREA(ACRES) = 51.80 SUBAREA RUNOFF(CFS) = 119.48
 EFFECTIVE AREA(ACRES) = 806.70 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp(INCH/HR) = 0.22 AREA-AVERAGED Ap = 0.89
 TOTAL AREA (ACRES) = 806.70 PEAK FLOW RATE (CFS) = 1743.68
******************
 FLOW PROCESS FROM NODE 884.00 TO NODE 884.00 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.) = 22.68
 RAINFALL INTENSITY (INCH/HR) = 2.60
 AREA-AVERAGED Fm(INCH/HR) = 0.20
 AREA-AVERAGED Fp (INCH/HR) = 0.22
 AREA-AVERAGED Ap = 0.89
 EFFECTIVE STREAM AREA(ACRES) = 806.70
 TOTAL STREAM AREA(ACRES) = 806.70
 PEAK FLOW RATE (CFS) AT CONFLUENCE = 1743.68
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** CONFLUENCE DATA **
                                  HEADWATER
                  Tc
                         AREA
 STREAM
 NUMBER
         (CFS)
                (MIN.) (ACRES)
                                  NODE
   1
         4748.70 87.92
                         5935.00
                                   3100.00
    2
         1743.68 22.68
                         806.70
                                   870.00
 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 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.) = 16.0%; VALLEY(UNDEV.) / DESERT = 8.0%
        MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.17; Fm(INCH/HR) = 0.22; Ybar = 0.39
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.74; 30M = 0.74; 1HR = 0.74;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 6741.70
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 884.00 = 53473.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0321; Lca/L=0.4, n=.0288; Lca/L=0.5, n=.0265; Lca/L=0.6, n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 2036.33
 PEAK FLOW RATE (CFS) = 4308.35
   (UPSTREAM NODE PEAK FLOW RATE(CFS) = 4748.70)
 PEAK FLOW RATE (CFS) USED = 4748.70
*******************
 FLOW PROCESS FROM NODE 884.00 TO NODE 885.00 IS CODE = 51
______
 >>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<
 >>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT) <
.....
 ELEVATION DATA: UPSTREAM(FEET) = 135.00 DOWNSTREAM(FEET) = 132.00
 CHANNEL LENGTH THRU SUBAREA(FEET) = 207.00 CHANNEL SLOPE = 0.0145
 CHANNEL BASE (FEET) = 85.00 "Z" FACTOR = 2.000
 MANNING'S FACTOR = 0.030 MAXIMUM DEPTH (FEET) = 15.00
 CHANNEL FLOW THRU SUBAREA(CFS) = 4748.70
 FLOW VELOCITY (FEET/SEC.) = 13.57 FLOW DEPTH (FEET) = 3.78
 TRAVEL TIME (MIN.) = 0.25 Tc (MIN.) = 88.17
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 885.00 = 53680.00 FEET.
FLOW PROCESS FROM NODE 884.00 TO NODE 885.00 IS CODE = 81
______
 >>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<
MAINLINE Tc (MIN) = 88.17
 * 100 YEAR RAINFALL INTENSITY(INCH/HR) = 1.195
 SUBAREA LOSS RATE DATA(AMC II):
                  SCS SOIL AREA
                                              Ap
  DEVELOPMENT TYPE/
                                     Fp
                                                      SCS
     LAND USE
                     GROUP (ACRES) (INCH/HR) (DECIMAL) CN
 NATURAL FAIR COVER
                       Α
                               1.30
                                        0.40
                                                1.00
 SUBAREA AVERAGE PERVIOUS LOSS RATE, Fp(INCH/HR) = 0.40
 SUBAREA AVERAGE PERVIOUS AREA FRACTION, Ap = 1.00
 SUBAREA AREA(ACRES) = 1.30
 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.) = 16.0%; VALLEY(UNDEV.) / DESERT = 8.0%
         MOUNTAIN= 62.0%; FOOTHILL= 14.0%; DESERT (UNDEV.) = 0.0%
 Tc(HR) = 1.47; LAG(HR) = 1.18; Fm(INCH/HR) = 0.22; Ybar = 0.39
 USED SIERRA MADRE DEPTH-AREA CURVES WITH AMC II CONDITION.
 DEPTH-AREA FACTORS: 5M = 0.74; 30M = 0.74; 1HR = 0.74;
 3HR = 0.96; 6HR = 0.98; 24HR = 0.99
 UNIT-INTERVAL(MIN) = 10.00 TOTAL AREA(ACRES) = 6743.00
 LONGEST FLOWPATH FROM NODE 3100.00 TO NODE 885.00 = 53680.00 FEET.
  EQUIVALENT BASIN FACTOR APPROXIMATIONS:
  Lca/L=0.3, n=.0321; Lca/L=0.4, n=.0288; Lca/L=0.5, n=.0265; Lca/L=0.6, n=.0247
 TIME OF PEAK FLOW(HR) = 16.83 RUNOFF VOLUME(AF) = 2036.45
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UNIT-HYDROGRAPH PEAK FLOW RATE (CFS) = 4301.63
TOTAL AREA (ACRES) = 6743.00 PEAK FLOW RATE (CFS) = 4748.70
NOTE: PEAK FLOW RATE DEFAULTED TO UPSTREAM VALUE

END OF STUDY SUMMARY:
TOTAL AREA (ACRES) = 6743.00 TC (MIN.) = 88.17
AREA-AVERAGED Fm (INCH/HR) = 0.22 Ybar = 0.39
PEAK FLOW RATE (CFS) = 4748.70

END OF INTEGRATED RATIONAL/UNIT-HYDROGRAPH METHOD ANALYSIS
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