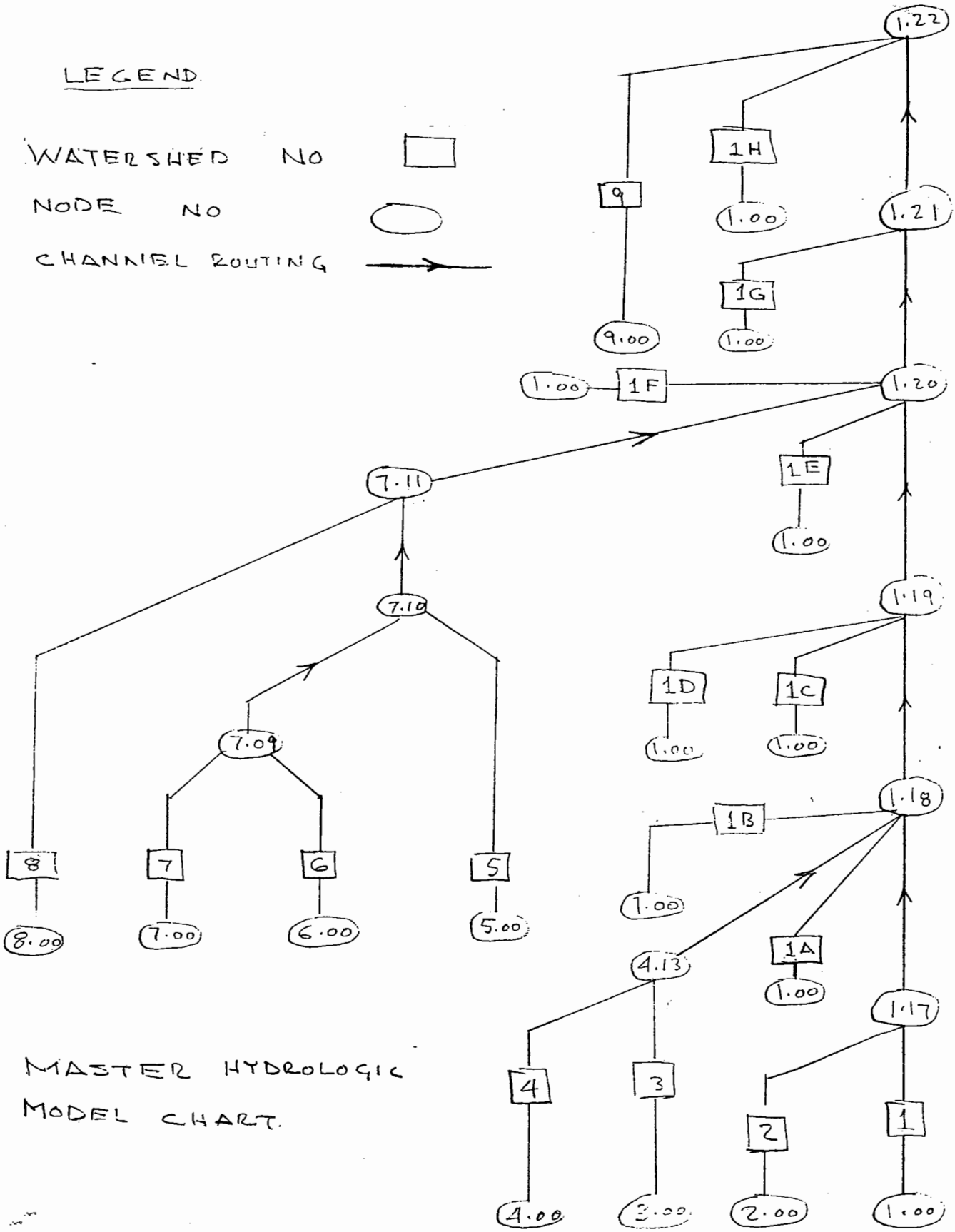
LEGEND

WATERSHED NO

NODE NO

CHANNEL ROUTING



MASTER HYDROLOGIC MODEL CHART.

VENTECH INC

PROJECT ADELANTO DATE CHECKED DATE 5/18/92

DETAIL CHECKED BY PAGE NO.

POINT PRECIPITATION IN INCH 100-YR FREQUENCY. 117/2

WATERSHED #	24 HR	6 HR	3 HR	1 HR	30 MIN	5 MIN
8	5.47	2.99	2.23	1.41	1.14	0.67
7	4.08	1.99	1.69	1.3	1.05	0.62
6	3.78	1.82	1.57	1.24	1.0	0.59
5	4.33	2.66	2.06	1.37	1.11	0.65
4	4.25	2.12	1.76	1.31	1.06	0.62
3	4.14	2.18	1.78	1.29	1.05	0.61
2	5.27	2.67	2.07	1.38	1.12	0.65
1	5.15	2.57	2.02	1.38	1.12	0.65
9	2.83	1.8	1.52	1.17	0.95	0.55
1A	3.02	1.8	1.55	1.2	0.97	0.57
1B	3.05	1.8	1.54	1.2	0.97	0.57
1C	3.0	1.8	1.54	1.2	0.97	0.57
1D	3.05	1.8	1.54	1.2	0.97	0.57
1E	3.00	1.8	1.54	1.2	0.97	0.57
1F	3.12	1.8	1.54	1.2	0.97	0.57
1G	2.98	1.8	1.54	1.2	0.97	0.57
1H	2.95	1.8	1.54	1.2	0.97	0.57

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

          F L O O D   R O U T I N G   A N A L Y S I S
    USING ORANGE/SAN BERNARDINO COUNTY UNIT-HYDROGRAPH (1986 MANUAL)
        (c) Copyright 1989-92 Advanced Engineering Software (aes)
            Ver. 1.9A  Release Date: 3/07/92  License ID 1263

                        Analysis prepared by:

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          23332 MILL CREEK DRIVE, SUITE 100, LAGUNA HILLS, CA 92653
         TELEPHONE: (714) 586 - 6121          FAX: (714) 586 - 2217

 ************************* DESCRIPTION OF STUDY *************************
*       AREA-DEPTH FACTOR CALCULATIONS AT NODE 1.17                      *
*                                                                        *
*                                                                        *
 **************************************************************************

  FILE NAME: ADF117.INP
  TIME/DATE OF STUDY:  7: 0   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.17 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

       WATERSHED AREA =   22307.000 ACRES      (FROM LOSS PRINTOUT)
       BASEFLOW =     .000 CFS/SQUARE-MILE
       *USER ENTERED "LAG" TIME =    2.000 HOURS*
       VALLEY(DEVELOPED) S-GRAPH SELECTED
       MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .250*
       LOW LOSS FRACTION =  .250*
       *HYDROGRAPH MODEL #3 SPECIFIED*

       SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .50*
       SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.00*
       SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.50*
       SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.00*
       SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50*
       SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  3.00*

       PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
         5-MINUTE FACTOR =  .506
        30-MINUTE FACTOR =  .534
         1-HOUR FACTOR =  .551
         3-HOUR FACTOR =  .879
         6-HOUR FACTOR =  .946
        24-HOUR FACTOR =  .966

       UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
       UNIT INTERVAL PERCENTAGE OF LAG-TIME =  12.500


       RUNOFF HYDROGRAPH LISTING LIMITS:
       MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 17.00
```

117/5

* = ARBITRARY INPUT — D.A.F. ARE NOT SENSITIVE TO THESE VALUES.

MODEL TIME(HOURS) FOR END OF RESULTS = 18.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.714	642.322
2	2.277	1405.289
3	4.834	2299.331
4	9.976	4623.973
5	16.914	6238.790
6	24.683	6986.504
7	33.407	7845.366
8	43.755	9304.852
9	55.000	10112.370
10	64.841	8849.545
11	73.262	7572.741
12	79.816	5893.541
13	84.997	4659.067
14	88.800	3419.859
15	91.564	2485.831
16	93.901	2100.978
17	95.570	1500.910
18	96.726	1039.265
19	97.691	868.055
20	98.164	425.531
21	98.398	210.762
22	98.633	210.762
23	98.867	210.762
24	99.102	210.762
25	99.336	210.762
26	99.570	210.762
27	99.805	210.762
28	100.000	175.635

TOTAL STORM RAINFALL(INCHES) = 2.90
TOTAL SOIL-LOSS(INCHES) = .70
TOTAL EFFECTIVE RAINFALL(INCHES) = 2.20

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1297.0800
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 4090.3470

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	2525.0	5050.0	7575.0	10100.0
17.083	1798.6360	9182.47	.	.	V .	.	Q .
17.167	1861.8760	9182.47	.	.	V .	.	Q .
17.250	1925.1160	9182.47	.	.	V .	.	Q .
17.333	1990.9730	9562.32	.	.	V.	.	Q .
17.417	2056.8290	9562.32	.	.	V	.	Q .
17.500	2122.6850	9562.32	.	.	V	.	Q .
17.583	2190.4440	9838.62	.	.	.V	.	Q .
17.667	2258.2030	9838.62	.	.	. V	.	Q .
17.750	2325.9620	9838.62	.	.	. V	.	Q .
17.833	2395.0620	10033.33	.	.	. V	.	Q.
17.917	2464.1620	10033.33	.	.	. V	.	Q.
18.000	2533.2620	10033.33	.	.	. V	.	Q.

END OF FLOOD ROUTING ANALYSIS

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
        (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
        (c) Copyright 1983-92 Advanced Engineering Software (aes)
           Ver. 1.5A  Release Date: 3/05/92  License ID 1263

                        Analysis prepared by:

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         TELEPHONE: (714) 586 - 6121           FAX: (714) 586 - 2217

 ************************* DESCRIPTION OF STUDY *************************
*                      WATERSHED 1                                      *
*                      TIME OF CONC. AT NODE 105                        *
*                                                                       *
 *************************************************************************

  FILE NAME: R105-117.INP
  TIME/DATE OF STUDY: 12:19   6/24/1992
=========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3800



**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
  NATURAL POOR COVER
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
  UPSTREAM ELEVATION(FEET) =   4620.00
  DOWNSTREAM ELEVATION(FEET) =   4600.00
  ELEVATION DIFFERENCE(FEET) =     20.00
  TC(MIN.) =  .525*[( 1000.00** 3.00)/(    20.00)]** .20 =   18.195
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.181
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =     27.01
  TOTAL AREA(ACRES) =     10.00   PEAK FLOW RATE(CFS) =     27.01

**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
```

```
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
================================================================================
 UPSTREAM NODE ELEVATION =   4600.00
 DOWNSTREAM NODE ELEVATION =   4340.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  4700.00
 CHANNEL SLOPE =   .0553
 CHANNEL FLOW THRU SUBAREA(CFS) =     27.01
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0553 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   3.95 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  19.84   TC(MIN.) =  38.04


********************************************************************************
 FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.899
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   24.80      SUBAREA RUNOFF(CFS) =   36.35
 EFFECTIVE AREA(ACRES) =   34.80   AREA-AVERAGED Fm(INCH/HR) =   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   34.80       PEAK FLOW RATE(CFS) =   51.82
 TC(MIN) =  38.04


********************************************************************************
 FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.899
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   18.00      SUBAREA RUNOFF(CFS) =   27.84
 EFFECTIVE AREA(ACRES) =   52.80   AREA-AVERAGED Fm(INCH/HR) =   .22
 AREA-AVERAGED Fp(INCH/HR) =   .22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   52.80       PEAK FLOW RATE(CFS) =   79.66
 TC(MIN) =  38.04


********************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.02 IS CODE =   1
--------------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
================================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  38.04
 RAINFALL INTENSITY(INCH/HR) =   1.90
 AREA-AVERAGED Fm(INCH/HR) =   .22
 AREA-AVERAGED Fp(INCH/HR) =   .22
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =   52.80
 TOTAL STREAM AREA(ACRES) =   52.80
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     79.66
```

```
**************************************************************************
 FLOW PROCESS FROM NODE     1.20 TO NODE     1.21 IS CODE = 2.1
--------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
 NATURAL POOR COVER
 TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   600.00
 UPSTREAM ELEVATION(FEET) =   4640.00
 DOWNSTREAM ELEVATION(FEET) =   4560.00
 ELEVATION DIFFERENCE(FEET) =     80.00
 TC(MIN.) =  .525*[(  600.00** 3.00)/(    80.00)]** .20 =   10.149
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.787
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA RUNOFF(CFS) =     72.36
 TOTAL AREA(ACRES) =     17.45   PEAK FLOW RATE(CFS) =     72.36


**************************************************************************
 FLOW PROCESS FROM NODE     1.21 TO NODE     1.22 IS CODE = 5.3
--------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
 UPSTREAM NODE ELEVATION =   4560.00
 DOWNSTREAM NODE ELEVATION =   4440.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2900.00
 CHANNEL SLOPE =   .0414
 CHANNEL FLOW THRU SUBAREA(CFS) =     72.36
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0414 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   4.74 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  10.20   TC(MIN.) =  20.35


**************************************************************************
 FLOW PROCESS FROM NODE     1.21 TO NODE     1.22 IS CODE =   8
--------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.942
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  106.50      SUBAREA RUNOFF(CFS) =  264.74
 EFFECTIVE AREA(ACRES) =   123.95   AREA-AVERAGED Fm(INCH/HR) =   .18
 AREA-AVERAGED Fp(INCH/HR) =   .18  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   123.95       PEAK FLOW RATE(CFS) =  308.12
 TC(MIN) =  20.35


**************************************************************************
 FLOW PROCESS FROM NODE     1.21 TO NODE     1.22 IS CODE =   8
--------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
```

```
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.942
SOIL CLASSIFICATION IS "B"
NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   10.10      SUBAREA RUNOFF(CFS) =   24.29
EFFECTIVE AREA(ACRES) =   134.05   AREA-AVERAGED Fm(INCH/HR) =   .19
AREA-AVERAGED Fp(INCH/HR) =   .19  AREA-AVERAGED Ap =  1.00
TOTAL AREA(ACRES) =   134.05       PEAK FLOW RATE(CFS) =  332.41
TC(MIN) =  20.35


****************************************************************************
FLOW PROCESS FROM NODE     1.22 TO NODE     1.02 IS CODE = 5.3
----------------------------------------------------------------------------
>>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
UPSTREAM NODE ELEVATION =   4440.00
DOWNSTREAM NODE ELEVATION =   4340.00
CHANNEL LENGTH THRU SUBAREA(FEET) =  2300.00
CHANNEL SLOPE =   .0435
CHANNEL FLOW THRU SUBAREA(CFS) =    332.41
SLOPE ADJUSTMENT CURVE USED:
EFFECTIVE SLOPE = .0435 (PER LACFCD HYDROLOGY MANUAL)
FLOW VELOCITY(FEET/SEC) =   8.07 (PER LACFCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) =   4.75   TC(MIN.) =  25.09


****************************************************************************
FLOW PROCESS FROM NODE     1.22 TO NODE     1.02 IS CODE =   8
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.540
SOIL CLASSIFICATION IS "B"
NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   80.80      SUBAREA RUNOFF(CFS) =  165.10
EFFECTIVE AREA(ACRES) =   214.85   AREA-AVERAGED Fm(INCH/HR) =   .22
AREA-AVERAGED Fp(INCH/HR) =   .22  AREA-AVERAGED Ap =  1.00
TOTAL AREA(ACRES) =   214.85       PEAK FLOW RATE(CFS) =  449.03
TC(MIN) =  25.09


****************************************************************************
FLOW PROCESS FROM NODE     1.22 TO NODE     1.02 IS CODE =   8
----------------------------------------------------------------------------
>>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.540
SOIL CLASSIFICATION IS "C"
NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
SUBAREA AREA(ACRES) =   28.46      SUBAREA RUNOFF(CFS) =   60.46
EFFECTIVE AREA(ACRES) =   243.31   AREA-AVERAGED Fm(INCH/HR) =   .21
AREA-AVERAGED Fp(INCH/HR) =   .21  AREA-AVERAGED Ap =  1.00
TOTAL AREA(ACRES) =   243.31       PEAK FLOW RATE(CFS) =  509.49
TC(MIN) =  25.09
```

```
**************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.02 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
==========================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  25.09
 RAINFALL INTENSITY(INCH/HR) =   2.54
 AREA-AVERAGED Fm(INCH/HR) =   .21
 AREA-AVERAGED Fp(INCH/HR) =   .21
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =  243.31
 TOTAL STREAM AREA(ACRES) =  243.31
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    509.49


**************************************************************************
 FLOW PROCESS FROM NODE     1.30 TO NODE     1.31 IS CODE = 2.1
--------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
 NATURAL POOR COVER
 TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   600.00
 UPSTREAM ELEVATION(FEET) =   4600.00
 DOWNSTREAM ELEVATION(FEET) =   4560.00
 ELEVATION DIFFERENCE(FEET) =     40.00
 TC(MIN.) =  .525*[(  600.00** 3.00)/(    40.00)]** .20 =   11.658
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.344
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA RUNOFF(CFS) =     37.48
 TOTAL AREA(ACRES) =     10.00   PEAK FLOW RATE(CFS) =     37.48


**************************************************************************
 FLOW PROCESS FROM NODE     1.31 TO NODE     1.32 IS CODE = 5.3
--------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
 UPSTREAM NODE ELEVATION =   4560.00
 DOWNSTREAM NODE ELEVATION =   4440.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2600.00
 CHANNEL SLOPE =   .0462
 CHANNEL FLOW THRU SUBAREA(CFS) =     37.48
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0462 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   4.02 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  10.78   TC(MIN.) =  22.43


**************************************************************************
 FLOW PROCESS FROM NODE     1.31 TO NODE     1.32 IS CODE =   8
--------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.748
```

```
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   37.64      SUBAREA RUNOFF(CFS) =   83.93
 EFFECTIVE AREA(ACRES) =   47.64   AREA-AVERAGED Fm(INCH/HR) =   .25
 AREA-AVERAGED Fp(INCH/HR) =   .25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   47.64       PEAK FLOW RATE(CFS) =  107.04
 TC(MIN) =  22.43


****************************************************************************
 FLOW PROCESS FROM NODE     1.31 TO NODE     1.32 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.748
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    9.18      SUBAREA RUNOFF(CFS) =   21.21
 EFFECTIVE AREA(ACRES) =   56.82   AREA-AVERAGED Fm(INCH/HR) =   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   56.82       PEAK FLOW RATE(CFS) =  128.25
 TC(MIN) =  22.43


****************************************************************************
 FLOW PROCESS FROM NODE     1.32 TO NODE     1.02 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4440.00
 DOWNSTREAM NODE ELEVATION =   4340.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3150.00
 CHANNEL SLOPE =   .0317
 CHANNEL FLOW THRU SUBAREA(CFS) =   128.25
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0317 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   5.02 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  10.45   TC(MIN.) =  32.88


****************************************************************************
 FLOW PROCESS FROM NODE     1.32 TO NODE     1.02 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.102
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   57.85      SUBAREA RUNOFF(CFS) =   95.40
 EFFECTIVE AREA(ACRES) =  114.67   AREA-AVERAGED Fm(INCH/HR) =   .25
 AREA-AVERAGED Fp(INCH/HR) =   .25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =  114.67       PEAK FLOW RATE(CFS) =  190.65
 TC(MIN) =  32.88
```

```
**************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.02 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
==========================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
 TIME OF CONCENTRATION(MIN.) =  32.88
 RAINFALL INTENSITY(INCH/HR) =   2.10
 AREA-AVERAGED Fm(INCH/HR) =   .25
 AREA-AVERAGED Fp(INCH/HR) =   .25
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =  114.67
 TOTAL STREAM AREA(ACRES) =  114.67
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    190.65

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  3 STREAMS.

 ** PEAK FLOW RATE TABLE **
        Q       Tc     Intensity     Fp       Ap       Fm          Ae
     (CFS)   (MIN.)   (INCH/HR)  (INCH/HR)          (INCH/HR)   (ACRES)
1    762.14    25.09      2.540       .22   1.00        .22      365.65
2    618.26    38.04      1.899       .23   1.00        .23      410.78
3    681.46    32.88      2.102       .23   1.00        .23      403.63

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =    762.14   Tc(MIN.) =   25.094
 EFFECTIVE AREA(ACRES) =    365.65  AREA-AVERAGED Fm(INCH/HR) =   .22
 AREA-AVERAGED Fp(INCH/HR) =   .22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    410.78


**************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE = 5.3
--------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
 UPSTREAM NODE ELEVATION =   4340.00
 DOWNSTREAM NODE ELEVATION =   4300.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   600.00
 CHANNEL SLOPE =   .0667
 CHANNEL FLOW THRU SUBAREA(CFS) =    762.14
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0667 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =  13.18 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =    .76   TC(MIN.) =  25.85


**************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
--------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.488
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   76.20      SUBAREA RUNOFF(CFS) =  152.10
```

```
 EFFECTIVE AREA(ACRES) =   441.85   AREA-AVERAGED Fm(INCH/HR) =   .23
 AREA-AVERAGED Fp(INCH/HR) =   .23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   486.98       PEAK FLOW RATE(CFS) =  896.99
 TC(MIN) =  25.85


****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.488
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   15.60      SUBAREA RUNOFF(CFS) =   32.40
 EFFECTIVE AREA(ACRES) =   457.45   AREA-AVERAGED Fm(INCH/HR) =   .23
 AREA-AVERAGED Fp(INCH/HR) =   .23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   502.58       PEAK FLOW RATE(CFS) =  929.39
 TC(MIN) =  25.85


****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.04 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4300.00
 DOWNSTREAM NODE ELEVATION =   4220.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2700.00
 CHANNEL SLOPE =   .0296
 CHANNEL FLOW THRU SUBAREA(CFS) =    929.39
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0296 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   9.39 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   4.79   TC(MIN.) =  30.65


****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.209
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  118.45      SUBAREA RUNOFF(CFS) =  206.66
 EFFECTIVE AREA(ACRES) =   575.90   AREA-AVERAGED Fm(INCH/HR) =   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   621.03       PEAK FLOW RATE(CFS) = 1021.05
 TC(MIN) =  30.65


****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.05 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
```

```
==============================================================================
 UPSTREAM NODE ELEVATION =   4220.00
 DOWNSTREAM NODE ELEVATION =   4120.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2750.00
 CHANNEL SLOPE =   .0364
 CHANNEL FLOW THRU SUBAREA(CFS) =   1021.05
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0364 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =  10.73 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   4.27   TC(MIN.) =  34.92


****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.016
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   85.39      SUBAREA RUNOFF(CFS) =  134.16
 EFFECTIVE AREA(ACRES) =   661.29   AREA-AVERAGED Fm(INCH/HR) =   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   706.42       PEAK FLOW RATE(CFS) = 1055.28
 TC(MIN) =  34.92
==============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =    706.42  TC(MIN.) =     34.92
 EFFECTIVE AREA(ACRES) =    661.29  AREA-AVERAGED Fm(INCH/HR)=   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 PEAK FLOW RATE(CFS)   =   1055.28

 ** PEAK FLOW RATE TABLE **
        Q       Tc     Intensity     Fp       Ap      Fm          Ae
      (CFS)   (MIN.)   (INCH/HR)  (INCH/HR)        (INCH/HR)   (ACRES)
 1   1055.28   34.92      2.016       .24   1.00       .24      661.29
 2    941.62   43.12      1.739       .24   1.00       .24      699.27
 3    862.47   48.61      1.599       .24   1.00       .24      706.42
==============================================================================
==============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

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

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 ************************* DESCRIPTION OF STUDY *************************
*                        TIME OF CONCENTRATION AT NODE 2.07              *
*                                                                        *
*                                                                        *
 ************************************************************************

  FILE NAME: R207-117.INP
  TIME/DATE OF STUDY: 15:16   6/24/1992
========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3800



**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
  NATURAL POOR COVER
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
  UPSTREAM ELEVATION(FEET) =   4640.00
  DOWNSTREAM ELEVATION(FEET) =   4580.00
  ELEVATION DIFFERENCE(FEET) =     60.00
  TC(MIN.) =  .525*[( 1000.00** 3.00)/(    60.00)]** .20 =   14.606
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.710
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =     16.52
  TOTAL AREA(ACRES) =      5.20   PEAK FLOW RATE(CFS) =     16.52

**************************************************************************
  FLOW PROCESS FROM NODE     2.01 TO NODE     2.02 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
```

```
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
================================================================================
  UPSTREAM NODE ELEVATION =   4580.00
  DOWNSTREAM NODE ELEVATION =   4440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1500.00
  CHANNEL SLOPE =   .0933
  CHANNEL FLOW THRU SUBAREA(CFS) =     16.52
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0933 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   4.35 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   5.74   TC(MIN.) =  20.35


********************************************************************************
  FLOW PROCESS FROM NODE     2.01 TO NODE     2.02 IS CODE =   8
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.942
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   34.00      SUBAREA RUNOFF(CFS) =   84.51
  EFFECTIVE AREA(ACRES) =   39.20   AREA-AVERAGED Fm(INCH/HR) =   .18
  AREA-AVERAGED Fp(INCH/HR) =   .18  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   39.20       PEAK FLOW RATE(CFS) =   97.44
  TC(MIN) =  20.35


********************************************************************************
  FLOW PROCESS FROM NODE     2.02 TO NODE     2.03 IS CODE = 5.3
--------------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
================================================================================
  UPSTREAM NODE ELEVATION =   4440.00
  DOWNSTREAM NODE ELEVATION =   4340.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2100.00
  CHANNEL SLOPE =   .0476
  CHANNEL FLOW THRU SUBAREA(CFS) =     97.44
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0476 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   5.61 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   6.23   TC(MIN.) =  26.58


********************************************************************************
  FLOW PROCESS FROM NODE     2.02 TO NODE     2.03 IS CODE =   8
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.440
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   27.50      SUBAREA RUNOFF(CFS) =   55.93
  EFFECTIVE AREA(ACRES) =   66.70   AREA-AVERAGED Fm(INCH/HR) =   .18
  AREA-AVERAGED Fp(INCH/HR) =   .18  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   66.70       PEAK FLOW RATE(CFS) =  135.66
  TC(MIN) =  26.58
```

```
****************************************************************************
 FLOW PROCESS FROM NODE     2.02 TO NODE     2.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.440
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   12.90      SUBAREA RUNOFF(CFS) =   23.57
 EFFECTIVE AREA(ACRES) =    79.60   AREA-AVERAGED Fm(INCH/HR) =   .22
 AREA-AVERAGED Fp(INCH/HR) =   .22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    79.60       PEAK FLOW RATE(CFS) =  159.23
 TC(MIN) =  26.58


****************************************************************************
 FLOW PROCESS FROM NODE     2.03 TO NODE     2.04 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4340.00
 DOWNSTREAM NODE ELEVATION =   4240.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3200.00
 CHANNEL SLOPE =   .0313
 CHANNEL FLOW THRU SUBAREA(CFS) =    159.23
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0313 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   5.36 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   9.96   TC(MIN.) =  36.54


****************************************************************************
 FLOW PROCESS FROM NODE     2.03 TO NODE     2.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.953
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    6.00      SUBAREA RUNOFF(CFS) =    9.57
 EFFECTIVE AREA(ACRES) =    85.60   AREA-AVERAGED Fm(INCH/HR) =   .21
 AREA-AVERAGED Fp(INCH/HR) =   .21  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    85.60       PEAK FLOW RATE(CFS) =  159.23
 TC(MIN) =  36.54


****************************************************************************
 FLOW PROCESS FROM NODE     2.03 TO NODE     2.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.953
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
```

```
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   40.80      SUBAREA RUNOFF(CFS) =   56.65
 EFFECTIVE AREA(ACRES) =   126.40   AREA-AVERAGED Fm(INCH/HR) =   .28
 AREA-AVERAGED Fp(INCH/HR) =   .28  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   126.40       PEAK FLOW RATE(CFS) =  190.56
 TC(MIN) =  36.54

****************************************************************************
 FLOW PROCESS FROM NODE     2.04 TO NODE     2.04 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.) =  36.54
 RAINFALL INTENSITY(INCH/HR) =   1.95
 AREA-AVERAGED Fm(INCH/HR) =   .28
 AREA-AVERAGED Fp(INCH/HR) =   .28
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =  126.40
 TOTAL STREAM AREA(ACRES) =  126.40
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    190.56


****************************************************************************
 FLOW PROCESS FROM NODE     2.20 TO NODE     2.21 IS CODE = 2.1
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 NATURAL POOR COVER
 TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
 INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
 UPSTREAM ELEVATION(FEET) =   4540.00
 DOWNSTREAM ELEVATION(FEET) =   4480.00
 ELEVATION DIFFERENCE(FEET) =     60.00
 TC(MIN.) =  .525*[( 1000.00** 3.00)/(    60.00)]** .20 =   14.606
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.710
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA RUNOFF(CFS) =     13.66
 TOTAL AREA(ACRES) =      4.30   PEAK FLOW RATE(CFS) =     13.66


****************************************************************************
 FLOW PROCESS FROM NODE     2.21 TO NODE     2.22 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4480.00
 DOWNSTREAM NODE ELEVATION =   4340.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2000.00
 CHANNEL SLOPE =   .0700
 CHANNEL FLOW THRU SUBAREA(CFS) =     13.66
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0700 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   3.54 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   9.42   TC(MIN.) =  24.03
```

```
****************************************************************************
 FLOW PROCESS FROM NODE     2.21 TO NODE     2.22 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.619
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   44.80      SUBAREA RUNOFF(CFS) =   89.06
 EFFECTIVE AREA(ACRES) =   49.10   AREA-AVERAGED Fm(INCH/HR) =   .39
 AREA-AVERAGED Fp(INCH/HR) =   .39  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   49.10       PEAK FLOW RATE(CFS) =   98.50
 TC(MIN) =  24.03


****************************************************************************
 FLOW PROCESS FROM NODE     2.21 TO NODE     2.22 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.619
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    2.00      SUBAREA RUNOFF(CFS) =    4.39
 EFFECTIVE AREA(ACRES) =   51.10   AREA-AVERAGED Fm(INCH/HR) =   .38
 AREA-AVERAGED Fp(INCH/HR) =   .38  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   51.10       PEAK FLOW RATE(CFS) =  102.89
 TC(MIN) =  24.03


****************************************************************************
 FLOW PROCESS FROM NODE     2.22 TO NODE     2.04 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4340.00
 DOWNSTREAM NODE ELEVATION =   4240.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3200.00
 CHANNEL SLOPE =   .0313
 CHANNEL FLOW THRU SUBAREA(CFS) =    102.89
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0313 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   4.63 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  11.51   TC(MIN.) =  35.54


****************************************************************************
 FLOW PROCESS FROM NODE     2.22 TO NODE     2.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.991
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
```

SUBAREA AREA(ACRES) = 69.80 SUBAREA RUNOFF(CFS) = 99.32
EFFECTIVE AREA(ACRES) = 120.90 AREA-AVERAGED Fm(INCH/HR) = .40
AREA-AVERAGED Fp(INCH/HR) = .40 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 120.90 PEAK FLOW RATE(CFS) = 173.34
TC(MIN) = 35.54

****
FLOW PROCESS FROM NODE 2.04 TO NODE 2.04 IS CODE = 1

>>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
>>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
==========
TOTAL NUMBER OF STREAMS = 2
CONFLUENCE VALUES USED FOR INDEPENDENT STREAM 2 ARE:
TIME OF CONCENTRATION(MIN.) = 35.54
RAINFALL INTENSITY(INCH/HR) = 1.99
AREA-AVERAGED Fm(INCH/HR) = .40
AREA-AVERAGED Fp(INCH/HR) = .40
AREA-AVERAGED Ap = 1.00
EFFECTIVE STREAM AREA(ACRES) = 120.90
TOTAL STREAM AREA(ACRES) = 120.90
PEAK FLOW RATE(CFS) AT CONFLUENCE = 173.34

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

** PEAK FLOW RATE TABLE **

	Q (CFS)	Tc (MIN.)	Intensity (INCH/HR)	Fp (INCH/HR)	Ap	Fm (INCH/HR)	Ae (ACRES)
1	359.73	36.54	1.953	.34	1.00	.34	247.30
2	362.92	35.54	1.991	.34	1.00	.34	243.84

COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
PEAK FLOW RATE(CFS) = 362.92 Tc(MIN.) = 35.540
EFFECTIVE AREA(ACRES) = 243.84 AREA-AVERAGED Fm(INCH/HR) = .34
AREA-AVERAGED Fp(INCH/HR) = .34 AREA-AVERAGED Ap = 1.00
TOTAL AREA(ACRES) = 247.30

****
FLOW PROCESS FROM NODE 2.04 TO NODE 2.05 IS CODE = 5.3

>>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
>>>>>TRAVELTIME THRU SUBAREA<<<<<
==========
UPSTREAM NODE ELEVATION = 4240.00
DOWNSTREAM NODE ELEVATION = 4120.00
CHANNEL LENGTH THRU SUBAREA(FEET) = 4200.00
CHANNEL SLOPE = .0286
CHANNEL FLOW THRU SUBAREA(CFS) = 362.92
SLOPE ADJUSTMENT CURVE USED:
EFFECTIVE SLOPE = .0286 (PER LACFCD HYDROLOGY MANUAL)
FLOW VELOCITY(FEET/SEC) = 6.74 (PER LACFCD HYDROLOGY MANUAL)
TRAVEL TIME(MIN.) = 10.39 TC(MIN.) = 45.93

****
FLOW PROCESS FROM NODE 2.04 TO NODE 2.05 IS CODE = 8

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

```
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.664
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  156.10      SUBAREA RUNOFF(CFS) =  176.16
 EFFECTIVE AREA(ACRES) =   399.94   AREA-AVERAGED Fm(INCH/HR) =   .37
 AREA-AVERAGED Fp(INCH/HR) =   .37  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   403.40       PEAK FLOW RATE(CFS) =  467.29
 TC(MIN) =  45.93

****************************************************************************
 FLOW PROCESS FROM NODE     2.04 TO NODE     2.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.664
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   27.60      SUBAREA RUNOFF(CFS) =   22.06
 EFFECTIVE AREA(ACRES) =   427.54   AREA-AVERAGED Fm(INCH/HR) =   .39
 AREA-AVERAGED Fp(INCH/HR) =   .40  AREA-AVERAGED Ap =   .99
 TOTAL AREA(ACRES) =   431.00       PEAK FLOW RATE(CFS) =  489.34
 TC(MIN) =  45.93

****************************************************************************
 FLOW PROCESS FROM NODE     2.04 TO NODE     2.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.664
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   32.10      SUBAREA RUNOFF(CFS) =   42.87
 EFFECTIVE AREA(ACRES) =   459.64   AREA-AVERAGED Fm(INCH/HR) =   .38
 AREA-AVERAGED Fp(INCH/HR) =   .38  AREA-AVERAGED Ap =   .99
 TOTAL AREA(ACRES) =   463.10       PEAK FLOW RATE(CFS) =  532.21
 TC(MIN) =  45.93

****************************************************************************
 FLOW PROCESS FROM NODE     2.05 TO NODE     2.06 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4120.00
 DOWNSTREAM NODE ELEVATION =   4080.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1700.00
 CHANNEL SLOPE =   .0235
 CHANNEL FLOW THRU SUBAREA(CFS) =    532.21
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0235 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   6.95 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   4.08   TC(MIN.) =  50.01
```

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****************************************************************************
 FLOW PROCESS FROM NODE     2.05 TO NODE     2.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.568
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   49.50      SUBAREA RUNOFF(CFS) =   51.58
 EFFECTIVE AREA(ACRES) =   509.14   AREA-AVERAGED Fm(INCH/HR) =   .38
 AREA-AVERAGED Fp(INCH/HR) =   .38  AREA-AVERAGED Ap =   .99
 TOTAL AREA(ACRES) =   512.60       PEAK FLOW RATE(CFS) =  543.99
 TC(MIN) =  50.01


****************************************************************************
 FLOW PROCESS FROM NODE     2.05 TO NODE     2.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.568
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   89.10      SUBAREA RUNOFF(CFS) =   63.49
 EFFECTIVE AREA(ACRES) =   598.24   AREA-AVERAGED Fm(INCH/HR) =   .44
 AREA-AVERAGED Fp(INCH/HR) =   .46  AREA-AVERAGED Ap =   .96
 TOTAL AREA(ACRES) =   601.70       PEAK FLOW RATE(CFS) =  607.48
 TC(MIN) =  50.01


****************************************************************************
 FLOW PROCESS FROM NODE     2.05 TO NODE     2.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.568
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.20      SUBAREA RUNOFF(CFS) =    5.25
 EFFECTIVE AREA(ACRES) =   602.44   AREA-AVERAGED Fm(INCH/HR) =   .44
 AREA-AVERAGED Fp(INCH/HR) =   .46  AREA-AVERAGED Ap =   .96
 TOTAL AREA(ACRES) =   605.90       PEAK FLOW RATE(CFS) =  612.73
 TC(MIN) =  50.01


****************************************************************************
 FLOW PROCESS FROM NODE     2.06 TO NODE     2.07 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4080.00
 DOWNSTREAM NODE ELEVATION =   3930.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  5600.00
 CHANNEL SLOPE =   .0268
```

```
 CHANNEL FLOW THRU SUBAREA(CFS) =    612.73
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0268 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   7.77 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  12.02   TC(MIN.) =  62.02


****************************************************************************
 FLOW PROCESS FROM NODE     2.06 TO NODE     2.07 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.348
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =  150.60      SUBAREA RUNOFF(CFS) =   77.58
 EFFECTIVE AREA(ACRES) =   753.04   AREA-AVERAGED Fm(INCH/HR) =   .51
 AREA-AVERAGED Fp(INCH/HR) =   .54  AREA-AVERAGED Ap =   .93
 TOTAL AREA(ACRES) =   756.50       PEAK FLOW RATE(CFS) =  612.73
 TC(MIN) =  62.02


****************************************************************************
 FLOW PROCESS FROM NODE     2.06 TO NODE     2.07 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.348
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   33.00      SUBAREA RUNOFF(CFS) =   26.74
 EFFECTIVE AREA(ACRES) =   786.04   AREA-AVERAGED Fm(INCH/HR) =   .50
 AREA-AVERAGED Fp(INCH/HR) =   .54  AREA-AVERAGED Ap =   .92
 TOTAL AREA(ACRES) =   789.50       PEAK FLOW RATE(CFS) =  612.73
 TC(MIN) =  62.02
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =    789.50  TC(MIN.) =     62.02
 EFFECTIVE AREA(ACRES) =    786.04  AREA-AVERAGED Fm(INCH/HR)=   .50
 AREA-AVERAGED Fp(INCH/HR) =   .54  AREA-AVERAGED Ap =   .92
 PEAK FLOW RATE(CFS)   =    612.73

 ** PEAK FLOW RATE TABLE **
        Q       Tc      Intensity     Fp       Ap       Fm          Ae
     (CFS)   (MIN.)    (INCH/HR)  (INCH/HR)          (INCH/HR)   (ACRES)
 1   612.73    62.02       1.348       .54    .92        .50       786.04
 2   604.44    63.12       1.332       .54    .92        .50       789.50
============================================================================
============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

WATERSHED 1 LOSS RATES AT NODE3 1.05

LOSS RATE RAW INPUT DATA AT NODE 1.05

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00

WATERSHED 1 LOSS RATES AT NODE3 1.05

LOSS RATE PROCESSED INPUT DATA AT NODE 1.05

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11

WATERSHED 1 LOSS RATES AT NODE3 1.05

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	706.42
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.092
LOW LOSS FRACTION (Y BAR)	=	.057

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

NODE 1.07

LOSS RATE RAW INPUT DATA AT NODE 1.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00

NODE 1.07

LOSS RATE PROCESSED INPUT DATA AT NODE 1.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23

NODE 1.07

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	940.11
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.123
LOW LOSS FRACTION (Y BAR)	=	.099

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

NODE 1.09

LOSS RATE RAW INPUT DATA AT NODE 1.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	46.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00

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NODE 1.09

LOSS RATE PROCESSED INPUT DATA AT NODE 1.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	46.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

NODE 1.09

LOSS RATE PROCESSED INPUT DATA AT NODE 1.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34

NODE 1.09

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	2338.36
24-HOUR RAIN (INCHES)	=	5.910
LOSS RATE FM (INCHES/HOUR)	=	.202
LOW LOSS FRACTION (Y BAR)	=	.187

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

NODE 1.12

LOSS RATE RAW INPUT DATA AT NODE 1.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	466.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00

NODE 1.12

LOSS RATE PROCESSED INPUT DATA AT NODE 1.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	466.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

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NODE 1.12

LOSS RATE PROCESSED INPUT DATA AT NODE 1.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34

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NODE 1.12

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	3489.29
24-HOUR RAIN (INCHES)	=	5.910
LOSS RATE FM (INCHES/HOUR)	=	.218
LOW LOSS FRACTION (Y BAR)	=	.209

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

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NODE 1.13

LOSS RATE RAW INPUT DATA AT NODE 1.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	466.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00
1.13	225.89	.20	56.00

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NODE 1.13

LOSS RATE PROCESSED INPUT DATA AT NODE 1.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	466.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

NODE 1.13

LOSS RATE PROCESSED INPUT DATA AT NODE 1.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34
1.13	180.71	.00	56.00	75.80	.42
1.13	45.18	1.00	98.00	98.00	.00
1.13	225.89	.20			.34

NODE 1.13

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	3715.18
24-HOUR RAIN (INCHES)	=	5.910
LOSS RATE FM (INCHES/HOUR)	=	.225
LOW LOSS FRACTION (Y BAR)	=	.218

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

NOD 114, WATERSHED 1

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	46.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00
1.13	225.89	.20	56.00
1.14	78.05	.20	56.00
1.41	5.50	.00	91.00

NOD 114, WATERSHED 1

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.42A	22.10	.00	86.00
1.42B	1.70	.00	91.00
1.43A	83.60	.00	86.00
1.43B	11.10	.00	91.00
1.44A	44.90	.00	86.00
1.44B	33.15	.00	91.00
1.45A	67.95	.00	86.00
1.45B	10.95	.00	91.00
1.81	9.80	.00	91.00
1.82A	33.90	.00	91.00
18.82B	6.43	.00	86.00
1.83	26.40	.00	91.00
1.91	12.85	.00	91.00
1.92	45.00	.00	91.00
1.83B	7.40	.00	91.00
1.84A	67.00	.00	91.00
121	9.18	.00	91.00
1.84B	68.80	.00	91.00
1.45C	126.70	.00	91.00
1.61	10.00	.00	86.00
1.62	106.92	.00	86.00
1.45D	65.19	.00	86.00
1.45E	2.76	.00	91.00
1.46A	47.75	.00	91.00
17.1	7.05	.00	91.00
17.2	75.30	.00	91.00
1.46B	107.40	.00	91.00
1.47A	15.60	.20	69.00
1.47B	101.00	.00	91.00
1.48A	22.95	.20	56.00
1.48B	122.10	.20	69.00
1.48C	47.75	.00	91.00
1.49A	125.00	.20	56.00
1.49B	17.95	.20	69.00
1.49C	15.90	.00	91.00
1.50	183.65	.00	91.00
1.51A	123.10	.20	56.00
10.1	10.00	.00	91.00
10.2	116.80	.00	91.00
10.3	158.00	.00	91.00
10.4A	81.70	.00	91.00

NOD 114, WATERSHED 1

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
11.1	10.00	.00	91.00
11.2	40.60	.00	91.00
11.3	78.97	.00	91.00
10.4B	101.00	.00	91.00
10.5A	140.50	.00	91.00
12.1	6.90	.00	91.00
12.2	18.40	.00	91.00
12.3	40.40	.00	91.00
12.4	44.50	.00	91.00
10.5B	97.30	.00	91.00
10.6A	86.30	.00	91.00
16.1	7.10	.00	91.00
16.2	26.60	.00	91.00
16.3	44.10	.00	91.00
10.6B	58.30	.00	91.00
10.7A	14.70	.20	56.00
10.7B	34.90	.20	69.00
10.7C	176.30	.00	91.00
10.8A	83.56	.20	56.00
10.8B	74.40	.20	69.00
10.9A	140.90	.20	56.00
10.9B	70.30	.20	91.00
1.51B	68.80	.20	56.00
1.51C	68.80	.20	69.00
1.52A	262.60	.20	56.00
1.52B	77.10	.20	69.00
1.53A	314.00	.20	56.00
1.53B	10.80	.20	69.00
14.1	7.90	.00	91.00
14.2	42.24	.00	91.00
14.3	50.50	.00	91.00
14.4A	8.10	.00	86.00
14.4B	24.80	.00	91.00
15.1	4.60	.00	91.00
15.2	47.75	.00	91.00
15.3A	9.20	.00	86.00
15.3B	76.20	.00	91.00
14.4C	3.10	.00	86.00
14.4D	6.20	.00	91.00
14.5A	42.30	.00	86.00
14.5B	22.00	.00	91.00

NOD 114, WATERSHED 1

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
14.6A	78.10	.00	86.00
14.6B	24.80	.00	91.00
14.6C	3.50	.20	56.00
14.7A	3.80	.00	86.00
14.7B	1.80	.20	69.00
14.7C	160.70	.20	56.00
14.8A	29.40	.20	56.00
18.1	8.87	.00	91.00
18.2	42.30	.00	91.00
18.3	66.00	.00	91.00
18.4A	75.30	.00	91.00
18.4B	11.30	.20	69.00
18.5A	167.10	.20	69.00
18.5B	29.40	.00	91.00
18.5C	14.70	.20	56.00
14.8B	14.05	.20	56.00
13.8A	31.20	.20	56.00
13.1	5.20	.00	91.00
13.2	26.60	.00	91.00
13.3	33.98	.00	91.00
13.4A	35.00	.00	86.00
13.4B	109.30	.00	91.00
13.5A	127.60	.00	86.00
13.5B	19.25	.00	91.00
13.6A	192.80	.00	91.00
13.6B	64.30	.00	86.00
13.7A	134.98	.20	56.00
13.7B	12.00	.00	86.00
13.7C	22.00	.00	91.00
13.8B	51.50	.20	56.00
13.9	127.70	.20	56.00
13.10A	88.20	.20	56.00
13.10B	28.50	.20	69.00
13.11	81.70	.20	69.00
13.12A	62.40	.20	56.00
13.12B	15.70	.20	69.00
131	4.20	.20	69.00
132	31.22	.20	69.00
133A	9.20	.20	69.00
133B	56.90	.20	56.00
134A	165.30	.20	69.00

NOD 114, WATERSHED 1

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
134B	90.90	.20	56.00
135A	257.00	.20	69.00
135B	58.80	.20	56.00
13.12C	21.10	.20	69.00
13.12D	17.70	.20	56.00
1.53C	17.70	.20	56.00
1.14B	190.10	.20	56.00

NOD 114, WATERSHED 1

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	46.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

NOD 114, WATERSHED 1

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34
1.13	180.71	.00	56.00	75.80	.42
1.13	45.18	1.00	98.00	98.00	.00
1.13	225.89	.20			.34
1.14	62.44	.00	56.00	75.80	.42
1.14	15.61	1.00	98.00	98.00	.00
1.14	78.05	.20			.34
1.41	5.50	.00	91.00	98.20	.06
1.42A	22.10	.00	86.00	97.20	.11
1.42B	1.70	.00	91.00	98.20	.06
1.43A	83.60	.00	86.00	97.20	.11
1.43B	11.10	.00	91.00	98.20	.06
1.44A	44.90	.00	86.00	97.20	.11

NOD 114, WATERSHED 1

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.44B	33.15	.00	91.00	98.20	.06
1.45A	67.95	.00	86.00	97.20	.11
1.45B	10.95	.00	91.00	98.20	.06
1.81	9.80	.00	91.00	98.20	.06
1.82A	33.90	.00	91.00	98.20	.06
18.82B	6.43	.00	86.00	97.20	.11
1.83	26.40	.00	91.00	98.20	.06
1.91	12.85	.00	91.00	98.20	.06
1.92	45.00	.00	91.00	98.20	.06
1.83B	7.40	.00	91.00	98.20	.06
1.84A	67.00	.00	91.00	98.20	.06
121	9.18	.00	91.00	98.20	.06
1.84B	68.80	.00	91.00	98.20	.06
1.45C	126.70	.00	91.00	98.20	.06
1.61	10.00	.00	86.00	97.20	.11
1.62	106.92	.00	86.00	97.20	.11
1.45D	65.19	.00	86.00	97.20	.11
1.45E	2.76	.00	91.00	98.20	.06
1.46A	47.75	.00	91.00	98.20	.06
17.1	7.05	.00	91.00	98.20	.06
17.2	75.30	.00	91.00	98.20	.06
1.46B	107.40	.00	91.00	98.20	.06
1.47A	12.48	.00	69.00	86.20	.29
1.47A	3.12	1.00	98.00	98.00	.00
1.47A	15.60	.20			.23
1.47B	101.00	.00	91.00	98.20	.06
1.48A	18.36	.00	56.00	75.80	.42
1.48A	4.59	1.00	98.00	98.00	.00
1.48A	22.95	.20			.34
1.48B	97.68	.00	69.00	86.20	.29
1.48B	24.42	1.00	98.00	98.00	.00
1.48B	122.10	.20			.23
1.48C	47.75	.00	91.00	98.20	.06
1.49A	100.00	.00	56.00	75.80	.42
1.49A	25.00	1.00	98.00	98.00	.00
1.49A	125.00	.20			.34
1.49B	14.36	.00	69.00	86.20	.29
1.49B	3.59	1.00	98.00	98.00	.00
1.49B	17.95	.20			.23
1.49C	15.90	.00	91.00	98.20	.06
1.50	183.65	.00	91.00	98.20	.06

NOD 114, WATERSHED 1

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-ll	RUNOFF CURVE NO. AMC-lll	LOSS RATE FM (IN/HR)
1.51A	98.48	.00	56.00	75.80	.42
1.51A	24.62	1.00	98.00	98.00	.00
1.51A	123.10	.20			.34
10.1	10.00	.00	91.00	98.20	.06
10.2	116.80	.00	91.00	98.20	.06
10.3	158.00	.00	91.00	98.20	.06
10.4A	81.70	.00	91.00	98.20	.06
11.1	10.00	.00	91.00	98.20	.06
11.2	40.60	.00	91.00	98.20	.06
11.3	78.97	.00	91.00	98.20	.06
10.4B	101.00	.00	91.00	98.20	.06
10.5A	140.50	.00	91.00	98.20	.06
12.1	6.90	.00	91.00	98.20	.06
12.2	18.40	.00	91.00	98.20	.06
12.3	40.40	.00	91.00	98.20	.06
12.4	44.50	.00	91.00	98.20	.06
10.5B	97.30	.00	91.00	98.20	.06
10.6A	86.30	.00	91.00	98.20	.06
16.1	7.10	.00	91.00	98.20	.06
16.2	26.60	.00	91.00	98.20	.06
16.3	44.10	.00	91.00	98.20	.06
10.6B	58.30	.00	91.00	98.20	.06
10.7A	11.76	.00	56.00	75.80	.42
10.7A	2.94	1.00	98.00	98.00	.00
10.7A	14.70	.20			.34
10.7B	27.92	.00	69.00	86.20	.29
10.7B	6.98	1.00	98.00	98.00	.00
10.7B	34.90	.20			.23
10.7C	176.30	.00	91.00	98.20	.06
10.8A	66.85	.00	56.00	75.80	.42
10.8A	16.71	1.00	98.00	98.00	.00
10.8A	83.56	.20			.34
10.8B	59.52	.00	69.00	86.20	.29
10.8B	14.88	1.00	98.00	98.00	.00
10.8B	74.40	.20			.23
10.9A	112.72	.00	56.00	75.80	.42
10.9A	28.18	1.00	98.00	98.00	.00
10.9A	140.90	.20			.34
10.9B	56.24	.00	91.00	98.20	.06
10.9B	14.06	1.00	98.00	98.00	.00
10.9B	70.30	.20			.05

NOD 114, WATERSHED 1

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51B	55.04	.00	56.00	75.80	.42
1.51B	13.76	1.00	98.00	98.00	.00
1.51B	68.80	.20			.34
1.51C	55.04	.00	69.00	86.20	.29
1.51C	13.76	1.00	98.00	98.00	.00
1.51C	68.80	.20			.23
1.52A	210.08	.00	56.00	75.80	.42
1.52A	52.52	1.00	98.00	98.00	.00
1.52A	262.60	.20			.34
1.52B	61.68	.00	69.00	86.20	.29
1.52B	15.42	1.00	98.00	98.00	.00
1.52B	77.10	.20			.23
1.53A	251.20	.00	56.00	75.80	.42
1.53A	62.80	1.00	98.00	98.00	.00
1.53A	314.00	.20			.34
1.53B	8.64	.00	69.00	86.20	.29
1.53B	2.16	1.00	98.00	98.00	.00
1.53B	10.80	.20			.23
14.1	7.90	.00	91.00	98.20	.06
14.2	42.24	.00	91.00	98.20	.06
14.3	50.50	.00	91.00	98.20	.06
14.4A	8.10	.00	86.00	97.20	.11
14.4B	24.80	.00	91.00	98.20	.06
15.1	4.60	.00	91.00	98.20	.06
15.2	47.75	.00	91.00	98.20	.06
15.3A	9.20	.00	86.00	97.20	.11
15.3B	76.20	.00	91.00	98.20	.06
14.4C	3.10	.00	86.00	97.20	.11
14.4D	6.20	.00	91.00	98.20	.06
14.5A	42.30	.00	86.00	97.20	.11
14.5B	22.00	.00	91.00	98.20	.06
14.6A	78.10	.00	86.00	97.20	.11
14.6B	24.80	.00	91.00	98.20	.06
14.6C	2.80	.00	56.00	75.80	.42
14.6C	.70	1.00	98.00	98.00	.00
14.6C	3.50	.20			.34
14.7A	3.80	.00	86.00	97.20	.11
14.7B	1.44	.00	69.00	86.20	.29
14.7B	.36	1.00	98.00	98.00	.00
14.7B	1.80	.20			.23
14.7C	128.56	.00	56.00	75.80	.42

NOD 114, WATERSHED 1

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-ll	RUNOFF CURVE NO. AMC-lll	LOSS RATE FM (IN/HR)
14.7C	32.14	1.00	98.00	98.00	.00
14.7C	160.70	.20			.34
14.8A	23.52	.00	56.00	75.80	.42
14.8A	5.88	1.00	98.00	98.00	.00
14.8A	29.40	.20			.34
18.1	8.87	.00	91.00	98.20	.06
18.2	42.30	.00	91.00	98.20	.06
18.3	66.00	.00	91.00	98.20	.06
18.4A	75.30	.00	91.00	98.20	.06
18.4B	9.04	.00	69.00	86.20	.29
18.4B	2.26	1.00	98.00	98.00	.00
18.4B	11.30	.20			.23
18.5A	133.68	.00	69.00	86.20	.29
18.5A	33.42	1.00	98.00	98.00	.00
18.5A	167.10	.20			.23
18.5B	29.40	.00	91.00	98.20	.06
18.5C	11.76	.00	56.00	75.80	.42
18.5C	2.94	1.00	98.00	98.00	.00
18.5C	14.70	.20			.34
14.8B	11.24	.00	56.00	75.80	.42
14.8B	2.81	1.00	98.00	98.00	.00
14.8B	14.05	.20			.34
13.8A	24.96	.00	56.00	75.80	.42
13.8A	6.24	1.00	98.00	98.00	.00
13.8A	31.20	.20			.34
13.1	5.20	.00	91.00	98.20	.06
13.2	26.60	.00	91.00	98.20	.06
13.3	33.98	.00	91.00	98.20	.06
13.4A	35.00	.00	86.00	97.20	.11
13.4B	109.30	.00	91.00	98.20	.06
13.5A	127.60	.00	86.00	97.20	.11
13.5B	19.25	.00	91.00	98.20	.06
13.6A	192.80	.00	91.00	98.20	.06
13.6B	64.30	.00	86.00	97.20	.11
13.7A	107.98	.00	56.00	75.80	.42
13.7A	27.00	1.00	98.00	98.00	.00
13.7A	134.98	.20			.34
13.7B	12.00	.00	86.00	97.20	.11
13.7C	22.00	.00	91.00	98.20	.06
13.8B	41.20	.00	56.00	75.80	.42
13.8B	10.30	1.00	98.00	98.00	.00
13.8B	51.50	.20			.34

NOD 114, WATERSHED 1

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.9	102.16	.00	56.00	75.80	.42
13.9	25.54	1.00	98.00	98.00	.00
13.9	127.70	.20			.34
13.10A	70.56	.00	56.00	75.80	.42
13.10A	17.64	1.00	98.00	98.00	.00
13.10A	88.20	.20			.34
13.10B	22.80	.00	69.00	86.20	.29
13.10B	5.70	1.00	98.00	98.00	.00
13.10B	28.50	.20			.23
13.11	65.36	.00	69.00	86.20	.29
13.11	16.34	1.00	98.00	98.00	.00
13.11	81.70	.20			.23
13.12A	49.92	.00	56.00	75.80	.42
13.12A	12.48	1.00	98.00	98.00	.00
13.12A	62.40	.20			.34
13.12B	12.56	.00	69.00	86.20	.29
13.12B	3.14	1.00	98.00	98.00	.00
13.12B	15.70	.20			.23
131	3.36	.00	69.00	86.20	.29
131	.84	1.00	98.00	98.00	.00
131	4.20	.20			.23
132	24.98	.00	69.00	86.20	.29
132	6.24	1.00	98.00	98.00	.00
132	31.22	.20			.23
133A	7.36	.00	69.00	86.20	.29
133A	1.84	1.00	98.00	98.00	.00
133A	9.20	.20			.23
133B	45.52	.00	56.00	75.80	.42
133B	11.38	1.00	98.00	98.00	.00
133B	56.90	.20			.34
134A	132.24	.00	69.00	86.20	.29
134A	33.06	1.00	98.00	98.00	.00
134A	165.30	.20			.23
134B	72.72	.00	56.00	75.80	.42
134B	18.18	1.00	98.00	98.00	.00
134B	90.90	.20			.34
135A	205.60	.00	69.00	86.20	.29
135A	51.40	1.00	98.00	98.00	.00
135A	257.00	.20			.23
135B	47.04	.00	56.00	75.80	.42
135B	11.76	1.00	98.00	98.00	.00
135B	58.80	.20			.34

NOD 114, WATERSHED 1

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.12C	16.88	.00	69.00	86.20	.29
13.12C	4.22	1.00	98.00	98.00	.00
13.12C	21.10	.20			.23
13.12D	14.16	.00	56.00	75.80	.42
13.12D	3.54	1.00	98.00	98.00	.00
13.12D	17.70	.20			.34
1.53C	14.16	.00	56.00	75.80	.42
1.53C	3.54	1.00	98.00	98.00	.00
1.53C	17.70	.20			.34
1.14B	152.08	.00	56.00	75.80	.42
1.14B	38.02	1.00	98.00	98.00	.00
1.14B	190.10	.20			.34

NOD 114, WATERSHED 1

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	11095.67
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.195
LOW LOSS FRACTION (Y BAR)	=	.207

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

NODE 1.16

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	46.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00
1.13	225.89	.20	56.00
1.14	78.05	.20	56.00
1.41	5.50	.00	91.00

NODE 1.16

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.42A	22.10	.00	86.00
1.42B	1.70	.00	91.00
1.43A	83.60	.00	86.00
1.43B	11.10	.00	91.00
1.44A	44.90	.00	86.00
1.44B	33.15	.00	91.00
1.45A	67.95	.00	86.00
1.45B	10.95	.00	91.00
1.81	9.80	.00	91.00
1.82A	33.90	.00	91.00
18.82B	6.43	.00	86.00
1.83	26.40	.00	91.00
1.91	12.85	.00	91.00
1.92	45.00	.00	91.00
1.83B	7.40	.00	91.00
1.84A	67.00	.00	91.00
121	9.18	.00	91.00
1.84B	68.80	.00	91.00
1.45C	126.70	.00	91.00
1.61	10.00	.00	86.00
1.62	106.92	.00	86.00
1.45D	65.19	.00	86.00
1.45E	2.76	.00	91.00
1.46A	47.75	.00	91.00
17.1	7.05	.00	91.00
17.2	75.30	.00	91.00
1.46B	107.40	.00	91.00
1.47A	15.60	.20	69.00
1.47B	101.00	.00	91.00
1.48A	22.95	.20	56.00
1.48B	122.10	.20	69.00
1.48C	47.75	.00	91.00
1.49A	125.00	.20	56.00
1.49B	17.95	.20	69.00
1.49C	15.90	.00	91.00
1.50	183.65	.00	91.00
1.51A	123.10	.20	56.00
10.1	10.00	.00	91.00
10.2	116.80	.00	91.00
10.3	158.00	.00	91.00
10.4A	81.70	.00	91.00

NODE 1.16

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
11.1	10.00	.00	91.00
11.2	40.60	.00	91.00
11.3	78.97	.00	91.00
10.4B	101.00	.00	91.00
10.5A	140.50	.00	91.00
12.1	6.90	.00	91.00
12.2	18.40	.00	91.00
12.3	40.40	.00	91.00
12.4	44.50	.00	91.00
10.5B	97.30	.00	91.00
10.6A	86.30	.00	91.00
16.1	7.10	.00	91.00
16.2	26.60	.00	91.00
16.3	44.10	.00	91.00
10.6B	58.30	.00	91.00
10.7A	14.70	.20	56.00
10.7B	34.90	.20	69.00
10.7C	176.30	.00	91.00
10.8A	83.56	.20	56.00
10.8B	74.40	.20	69.00
10.9A	140.90	.20	56.00
10.9B	70.30	.20	91.00
1.51B	68.80	.20	56.00
1.51C	68.80	.20	69.00
1.52A	262.60	.20	56.00
1.52B	77.10	.20	69.00
1.53A	314.00	.20	56.00
1.53B	10.80	.20	69.00
14.1	7.90	.00	91.00
14.2	42.24	.00	91.00
14.3	50.50	.00	91.00
14.4A	8.10	.00	86.00
14.4B	24.80	.00	91.00
15.1	4.60	.00	91.00
15.2	47.75	.00	91.00
15.3A	9.20	.00	86.00
15.3B	76.20	.00	91.00
14.4C	3.10	.00	86.00
14.4D	6.20	.00	91.00
14.5A	42.30	.00	86.00
14.5B	22.00	.00	91.00

NODE 1.16

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
14.6A	78.10	.00	86.00
14.6B	24.80	.00	91.00
14.6C	3.50	.20	56.00
14.7A	3.80	.00	86.00
14.7B	1.80	.20	69.00
14.7C	160.70	.20	56.00
14.8A	29.40	.20	56.00
18.1	8.87	.00	91.00
18.2	42.30	.00	91.00
18.3	66.00	.00	91.00
18.4A	75.30	.00	91.00
18.4B	11.30	.20	69.00
18.5A	167.10	.20	69.00
18.5B	29.40	.00	91.00
18.5C	14.70	.20	56.00
14.8B	14.05	.20	56.00
13.8A	31.20	.20	56.00
13.1	5.20	.00	91.00
13.2	26.60	.00	91.00
13.3	33.98	.00	91.00
13.4A	35.00	.00	86.00
13.4B	109.30	.00	91.00
13.5A	127.60	.00	86.00
13.5B	19.25	.00	91.00
13.6A	192.80	.00	91.00
13.6B	64.30	.00	86.00
13.7A	134.98	.20	56.00
13.7B	12.00	.00	86.00
13.7C	22.00	.00	91.00
13.8B	51.50	.20	56.00
13.9	127.70	.20	56.00
13.10A	88.20	.20	56.00
13.10B	28.50	.20	69.00
13.11	81.70	.20	69.00
13.12A	62.40	.20	56.00
13.12B	15.70	.20	69.00
131	4.20	.20	69.00
132	31.22	.20	69.00
133A	9.20	.20	69.00
133B	56.90	.20	56.00
134A	165.30	.20	69.00

NODE 1.16

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
134B	90.90	.20	56.00
135A	257.00	.20	69.00
135B	58.80	.20	56.00
13.12C	21.10	.20	69.00
13.12D	17.70	.20	56.00
1.53C	17.70	.20	56.00
1.14B	190.10	.20	56.00
1.15	417.81	.20	56.00
1.16A	73.46	.20	56.00
1.16B	72.54	.20	69.00
19.1A	2.40	.20	56.00
19.1B	6.40	.20	69.00
19.2	13.80	.20	56.00
19.3A	80.80	.20	56.00
19.3B	11.00	.20	69.00
19.4	218.50	.20	56.00
19.5	476.60	.20	56.00
19.6	238.75	.20	56.00
19.7	116.60	.20	56.00
19.8A	733.70	.20	56.00
19.8B	20.80	.20	69.00
1.16C	313.10	.20	56.00
1.16D	275.50	.20	69.00

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	46.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34
1.13	180.71	.00	56.00	75.80	.42
1.13	45.18	1.00	98.00	98.00	.00
1.13	225.89	.20			.34
1.14	62.44	.00	56.00	75.80	.42
1.14	15.61	1.00	98.00	98.00	.00
1.14	78.05	.20			.34
1.41	5.50	.00	91.00	98.20	.06
1.42A	22.10	.00	86.00	97.20	.11
1.42B	1.70	.00	91.00	98.20	.06
1.43A	83.60	.00	86.00	97.20	.11
1.43B	11.10	.00	91.00	98.20	.06
1.44A	44.90	.00	86.00	97.20	.11

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.44B	33.15	.00	91.00	98.20	.06
1.45A	67.95	.00	86.00	97.20	.11
1.45B	10.95	.00	91.00	98.20	.06
1.81	9.80	.00	91.00	98.20	.06
1.82A	33.90	.00	91.00	98.20	.06
18.82B	6.43	.00	86.00	97.20	.11
1.83	26.40	.00	91.00	98.20	.06
1.91	12.85	.00	91.00	98.20	.06
1.92	45.00	.00	91.00	98.20	.06
1.83B	7.40	.00	91.00	98.20	.06
1.84A	67.00	.00	91.00	98.20	.06
121	9.18	.00	91.00	98.20	.06
1.84B	68.80	.00	91.00	98.20	.06
1.45C	126.70	.00	91.00	98.20	.06
1.61	10.00	.00	86.00	97.20	.11
1.62	106.92	.00	86.00	97.20	.11
1.45D	65.19	.00	86.00	97.20	.11
1.45E	2.76	.00	91.00	98.20	.06
1.46A	47.75	.00	91.00	98.20	.06
17.1	7.05	.00	91.00	98.20	.06
17.2	75.30	.00	91.00	98.20	.06
1.46B	107.40	.00	91.00	98.20	.06
1.47A	12.48	.00	69.00	86.20	.29
1.47A	3.12	1.00	98.00	98.00	.00
1.47A	15.60	.20			.23
1.47B	101.00	.00	91.00	98.20	.06
1.48A	18.36	.00	56.00	75.80	.42
1.48A	4.59	1.00	98.00	98.00	.00
1.48A	22.95	.20			.34
1.48B	97.68	.00	69.00	86.20	.29
1.48B	24.42	1.00	98.00	98.00	.00
1.48B	122.10	.20			.23
1.48C	47.75	.00	91.00	98.20	.06
1.49A	100.00	.00	56.00	75.80	.42
1.49A	25.00	1.00	98.00	98.00	.00
1.49A	125.00	.20			.34
1.49B	14.36	.00	69.00	86.20	.29
1.49B	3.59	1.00	98.00	98.00	.00
1.49B	17.95	.20			.23
1.49C	15.90	.00	91.00	98.20	.06
1.50	183.65	.00	91.00	98.20	.06

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51A	98.48	.00	56.00	75.80	.42
1.51A	24.62	1.00	98.00	98.00	.00
1.51A	123.10	.20			.34
10.1	10.00	.00	91.00	98.20	.06
10.2	116.80	.00	91.00	98.20	.06
10.3	158.00	.00	91.00	98.20	.06
10.4A	81.70	.00	91.00	98.20	.06
11.1	10.00	.00	91.00	98.20	.06
11.2	40.60	.00	91.00	98.20	.06
11.3	78.97	.00	91.00	98.20	.06
10.4B	101.00	.00	91.00	98.20	.06
10.5A	140.50	.00	91.00	98.20	.06
12.1	6.90	.00	91.00	98.20	.06
12.2	18.40	.00	91.00	98.20	.06
12.3	40.40	.00	91.00	98.20	.06
12.4	44.50	.00	91.00	98.20	.06
10.5B	97.30	.00	91.00	98.20	.06
10.6A	86.30	.00	91.00	98.20	.06
16.1	7.10	.00	91.00	98.20	.06
16.2	26.60	.00	91.00	98.20	.06
16.3	44.10	.00	91.00	98.20	.06
10.6B	58.30	.00	91.00	98.20	.06
10.7A	11.76	.00	56.00	75.80	.42
10.7A	2.94	1.00	98.00	98.00	.00
10.7A	14.70	.20			.34
10.7B	27.92	.00	69.00	86.20	.29
10.7B	6.98	1.00	98.00	98.00	.00
10.7B	34.90	.20			.23
10.7C	176.30	.00	91.00	98.20	.06
10.8A	66.85	.00	56.00	75.80	.42
10.8A	16.71	1.00	98.00	98.00	.00
10.8A	83.56	.20			.34
10.8B	59.52	.00	69.00	86.20	.29
10.8B	14.88	1.00	98.00	98.00	.00
10.8B	74.40	.20			.23
10.9A	112.72	.00	56.00	75.80	.42
10.9A	28.18	1.00	98.00	98.00	.00
10.9A	140.90	.20			.34
10.9B	56.24	.00	91.00	98.20	.06
10.9B	14.06	1.00	98.00	98.00	.00
10.9B	70.30	.20			.05

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51B	55.04	.00	56.00	75.80	.42
1.51B	13.76	1.00	98.00	98.00	.00
1.51B	68.80	.20			.34
1.51C	55.04	.00	69.00	86.20	.29
1.51C	13.76	1.00	98.00	98.00	.00
1.51C	68.80	.20			.23
1.52A	210.08	.00	56.00	75.80	.42
1.52A	52.52	1.00	98.00	98.00	.00
1.52A	262.60	.20			.34
1.52B	61.68	.00	69.00	86.20	.29
1.52B	15.42	1.00	98.00	98.00	.00
1.52B	77.10	.20			.23
1.53A	251.20	.00	56.00	75.80	.42
1.53A	62.80	1.00	98.00	98.00	.00
1.53A	314.00	.20			.34
1.53B	8.64	.00	69.00	86.20	.29
1.53B	2.16	1.00	98.00	98.00	.00
1.53B	10.80	.20			.23
14.1	7.90	.00	91.00	98.20	.06
14.2	42.24	.00	91.00	98.20	.06
14.3	50.50	.00	91.00	98.20	.06
14.4A	8.10	.00	86.00	97.20	.11
14.4B	24.80	.00	91.00	98.20	.06
15.1	4.60	.00	91.00	98.20	.06
15.2	47.75	.00	91.00	98.20	.06
15.3A	9.20	.00	86.00	97.20	.11
15.3B	76.20	.00	91.00	98.20	.06
14.4C	3.10	.00	86.00	97.20	.11
14.4D	6.20	.00	91.00	98.20	.06
14.5A	42.30	.00	86.00	97.20	.11
14.5B	22.00	.00	91.00	98.20	.06
14.6A	78.10	.00	86.00	97.20	.11
14.6B	24.80	.00	91.00	98.20	.06
14.6C	2.80	.00	56.00	75.80	.42
14.6C	.70	1.00	98.00	98.00	.00
14.6C	3.50	.20			.34
14.7A	3.80	.00	86.00	97.20	.11
14.7B	1.44	.00	69.00	86.20	.29
14.7B	.36	1.00	98.00	98.00	.00
14.7B	1.80	.20			.23
14.7C	128.56	.00	56.00	75.80	.42

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
14.7C	32.14	1.00	98.00	98.00	.00
14.7C	160.70	.20			.34
14.8A	23.52	.00	56.00	75.80	.42
14.8A	5.88	1.00	98.00	98.00	.00
14.8A	29.40	.20			.34
18.1	8.87	.00	91.00	98.20	.06
18.2	42.30	.00	91.00	98.20	.06
18.3	66.00	.00	91.00	98.20	.06
18.4A	75.30	.00	91.00	98.20	.06
18.4B	9.04	.00	69.00	86.20	.29
18.4B	2.26	1.00	98.00	98.00	.00
18.4B	11.30	.20			.23
18.5A	133.68	.00	69.00	86.20	.29
18.5A	33.42	1.00	98.00	98.00	.00
18.5A	167.10	.20			.23
18.5B	29.40	.00	91.00	98.20	.06
18.5C	11.76	.00	56.00	75.80	.42
18.5C	2.94	1.00	98.00	98.00	.00
18.5C	14.70	.20			.34
14.8B	11.24	.00	56.00	75.80	.42
14.8B	2.81	1.00	98.00	98.00	.00
14.8B	14.05	.20			.34
13.8A	24.96	.00	56.00	75.80	.42
13.8A	6.24	1.00	98.00	98.00	.00
13.8A	31.20	.20			.34
13.1	5.20	.00	91.00	98.20	.06
13.2	26.60	.00	91.00	98.20	.06
13.3	33.98	.00	91.00	98.20	.06
13.4A	35.00	.00	86.00	97.20	.11
13.4B	109.30	.00	91.00	98.20	.06
13.5A	127.60	.00	86.00	97.20	.11
13.5B	19.25	.00	91.00	98.20	.06
13.6A	192.80	.00	91.00	98.20	.06
13.6B	64.30	.00	86.00	97.20	.11
13.7A	107.98	.00	56.00	75.80	.42
13.7A	27.00	1.00	98.00	98.00	.00
13.7A	134.98	.20			.34
13.7B	12.00	.00	86.00	97.20	.11
13.7C	22.00	.00	91.00	98.20	.06
13.8B	41.20	.00	56.00	75.80	.42
13.8B	10.30	1.00	98.00	98.00	.00
13.8B	51.50	.20			.34

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.9	102.16	.00	56.00	75.80	.42
13.9	25.54	1.00	98.00	98.00	.00
13.9	127.70	.20			.34
13.10A	70.56	.00	56.00	75.80	.42
13.10A	17.64	1.00	98.00	98.00	.00
13.10A	88.20	.20			.34
13.10B	22.80	.00	69.00	86.20	.29
13.10B	5.70	1.00	98.00	98.00	.00
13.10B	28.50	.20			.23
13.11	65.36	.00	69.00	86.20	.29
13.11	16.34	1.00	98.00	98.00	.00
13.11	81.70	.20			.23
13.12A	49.92	.00	56.00	75.80	.42
13.12A	12.48	1.00	98.00	98.00	.00
13.12A	62.40	.20			.34
13.12B	12.56	.00	69.00	86.20	.29
13.12B	3.14	1.00	98.00	98.00	.00
13.12B	15.70	.20			.23
131	3.36	.00	69.00	86.20	.29
131	.84	1.00	98.00	98.00	.00
131	4.20	.20			.23
132	24.98	.00	69.00	86.20	.29
132	6.24	1.00	98.00	98.00	.00
132	31.22	.20			.23
133A	7.36	.00	69.00	86.20	.29
133A	1.84	1.00	98.00	98.00	.00
133A	9.20	.20			.23
133B	45.52	.00	56.00	75.80	.42
133B	11.38	1.00	98.00	98.00	.00
133B	56.90	.20			.34
134A	132.24	.00	69.00	86.20	.29
134A	33.06	1.00	98.00	98.00	.00
134A	165.30	.20			.23
134B	72.72	.00	56.00	75.80	.42
134B	18.18	1.00	98.00	98.00	.00
134B	90.90	.20			.34
135A	205.60	.00	69.00	86.20	.29
135A	51.40	1.00	98.00	98.00	.00
135A	257.00	.20			.23
135B	47.04	.00	56.00	75.80	.42
135B	11.76	1.00	98.00	98.00	.00
135B	58.80	.20			.34

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.12C	16.88	.00	69.00	86.20	.29
13.12C	4.22	1.00	98.00	98.00	.00
13.12C	21.10	.20			.23
13.12D	14.16	.00	56.00	75.80	.42
13.12D	3.54	1.00	98.00	98.00	.00
13.12D	17.70	.20			.34
1.53C	14.16	.00	56.00	75.80	.42
1.53C	3.54	1.00	98.00	98.00	.00
1.53C	17.70	.20			.34
1.14B	152.08	.00	56.00	75.80	.42
1.14B	38.02	1.00	98.00	98.00	.00
1.14B	190.10	.20			.34
1.15	334.25	.00	56.00	75.80	.42
1.15	83.56	1.00	98.00	98.00	.00
1.15	417.81	.20			.34
1.16A	58.77	.00	56.00	75.80	.42
1.16A	14.69	1.00	98.00	98.00	.00
1.16A	73.46	.20			.34
1.16B	58.03	.00	69.00	86.20	.29
1.16B	14.51	1.00	98.00	98.00	.00
1.16B	72.54	.20			.23
19.1A	1.92	.00	56.00	75.80	.42
19.1A	.48	1.00	98.00	98.00	.00
19.1A	2.40	.20			.34
19.1B	5.12	.00	69.00	86.20	.29
19.1B	1.28	1.00	98.00	98.00	.00
19.1B	6.40	.20			.23
19.2	11.04	.00	56.00	75.80	.42
19.2	2.76	1.00	98.00	98.00	.00
19.2	13.80	.20			.34
19.3A	64.64	.00	56.00	75.80	.42
19.3A	16.16	1.00	98.00	98.00	.00
19.3A	80.80	.20			.34
19.3B	8.80	.00	69.00	86.20	.29
19.3B	2.20	1.00	98.00	98.00	.00
19.3B	11.00	.20			.23
19.4	174.80	.00	56.00	75.80	.42
19.4	43.70	1.00	98.00	98.00	.00
19.4	218.50	.20			.34
19.5	381.28	.00	56.00	75.80	.42
19.5	95.32	1.00	98.00	98.00	.00
19.5	476.60	.20			.34

NODE 1.16

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
19.6	191.00	.00	56.00	75.80	.42
19.6	47.75	1.00	98.00	98.00	.00
19.6	238.75	.20			.34
19.7	93.28	.00	56.00	75.80	.42
19.7	23.32	1.00	98.00	98.00	.00
19.7	116.60	.20			.34
19.8A	586.96	.00	56.00	75.80	.42
19.8A	146.74	1.00	98.00	98.00	.00
19.8A	733.70	.20			.34
19.8B	16.64	.00	69.00	86.20	.29
19.8B	4.16	1.00	98.00	98.00	.00
19.8B	20.80	.20			.23
1.16C	250.48	.00	56.00	75.80	.42
1.16C	62.62	1.00	98.00	98.00	.00
1.16C	313.10	.20			.34
1.16D	220.40	.00	69.00	86.20	.29
1.16D	55.10	1.00	98.00	98.00	.00
1.16D	275.50	.20			.23

NODE 1.16

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	14167.44
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.222
LOW LOSS FRACTION (Y BAR)	=	.244

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	46.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00
1.13	225.89	.20	56.00
1.14	78.05	.20	56.00
1.41	5.50	.00	91.00

NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.42A	22.10	.00	86.00
1.42B	1.70	.00	91.00
1.43A	83.60	.00	86.00
1.43B	11.10	.00	91.00
1.44A	44.90	.00	86.00
1.44B	33.15	.00	91.00
1.45A	67.95	.00	86.00
1.45B	10.95	.00	91.00
1.81	9.80	.00	91.00
1.82A	33.90	.00	91.00
18.82B	6.43	.00	86.00
1.83	26.40	.00	91.00
1.91	12.85	.00	91.00
1.92	45.00	.00	91.00
1.83B	7.40	.00	91.00
1.84A	67.00	.00	91.00
121	9.18	.00	91.00
1.84B	68.80	.00	91.00
1.45C	126.70	.00	91.00
1.61	10.00	.00	86.00
1.62	106.92	.00	86.00
1.45D	65.19	.00	86.00
1.45E	2.76	.00	91.00
1.46A	47.75	.00	91.00
17.1	7.05	.00	91.00
17.2	75.30	.00	91.00
1.46B	107.40	.00	91.00
1.47A	15.60	.20	69.00
1.47B	101.00	.00	91.00
1.48A	22.95	.20	56.00
1.48B	122.10	.20	69.00
1.48C	47.75	.00	91.00
1.49A	125.00	.20	56.00
1.49B	17.95	.20	69.00
1.49C	15.90	.00	91.00
1.50	183.65	.00	91.00
1.51A	123.10	.20	56.00
10.1	10.00	.00	91.00
10.2	116.80	.00	91.00
10.3	158.00	.00	91.00
10.4A	81.70	.00	91.00

NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
11.1	10.00	.00	91.00
11.2	40.60	.00	91.00
11.3	78.97	.00	91.00
10.4B	101.00	.00	91.00
10.5A	140.50	.00	91.00
12.1	6.90	.00	91.00
12.2	18.40	.00	91.00
12.3	40.40	.00	91.00
12.4	44.50	.00	91.00
10.5B	97.30	.00	91.00
10.6A	86.30	.00	91.00
16.1	7.10	.00	91.00
16.2	26.60	.00	91.00
16.3	44.10	.00	91.00
10.6B	58.30	.00	91.00
10.7A	14.70	.20	56.00
10.7B	34.90	.20	69.00
10.7C	176.30	.00	91.00
10.8A	83.56	.20	56.00
10.8B	74.40	.20	69.00
10.9A	140.90	.20	56.00
10.9B	70.30	.20	91.00
1.51B	68.80	.20	56.00
1.51C	68.80	.20	69.00
1.52A	262.60	.20	56.00
1.52B	77.10	.20	69.00
1.53A	314.00	.20	56.00
1.53B	10.80	.20	69.00
14.1	7.90	.00	91.00
14.2	42.24	.00	91.00
14.3	50.50	.00	91.00
14.4A	8.10	.00	86.00
14.4B	24.80	.00	91.00
15.1	4.60	.00	91.00
15.2	47.75	.00	91.00
15.3A	9.20	.00	86.00
15.3B	76.20	.00	91.00
14.4C	3.10	.00	86.00
14.4D	6.20	.00	91.00
14.5A	42.30	.00	86.00
14.5B	22.00	.00	91.00

NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
14.6A	78.10	.00	86.00
14.6B	24.80	.00	91.00
14.6C	3.50	.20	56.00
14.7A	3.80	.00	86.00
14.7B	1.80	.20	69.00
14.7C	160.70	.20	56.00
14.8A	29.40	.20	56.00
18.1	8.87	.00	91.00
18.2	42.30	.00	91.00
18.3	66.00	.00	91.00
18.4A	75.30	.00	91.00
18.4B	11.30	.20	69.00
18.5A	167.10	.20	69.00
18.5B	29.40	.00	91.00
18.5C	14.70	.20	56.00
14.8B	14.05	.20	56.00
13.8A	31.20	.20	56.00
13.1	5.20	.00	91.00
13.2	26.60	.00	91.00
13.3	33.98	.00	91.00
13.4A	35.00	.00	86.00
13.4B	109.30	.00	91.00
13.5A	127.60	.00	86.00
13.5B	19.25	.00	91.00
13.6A	192.80	.00	91.00
13.6B	64.30	.00	86.00
13.7A	134.98	.20	56.00
13.7B	12.00	.00	86.00
13.7C	22.00	.00	91.00
13.8B	51.50	.20	56.00
13.9	127.70	.20	56.00
13.10A	88.20	.20	56.00
13.10B	28.50	.20	69.00
13.11	81.70	.20	69.00
13.12A	62.40	.20	56.00
13.12B	15.70	.20	69.00
131	4.20	.20	69.00
132	31.22	.20	69.00
133A	9.20	.20	69.00
133B	56.90	.20	56.00
134A	165.30	.20	69.00

NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
134B	90.90	.20	56.00
135A	257.00	.20	69.00
135B	58.80	.20	56.00
13.12C	21.10	.20	69.00
13.12D	17.70	.20	56.00
1.53C	17.70	.20	56.00
1.14B	190.10	.20	56.00
1.15	417.81	.20	56.00
1.16A	73.46	.20	56.00
1.16B	72.54	.20	69.00
19.1A	2.40	.20	56.00
19.1B	6.40	.20	69.00
19.2	13.80	.20	56.00
19.3A	80.80	.20	56.00
19.3B	11.00	.20	69.00
19.4	218.50	.20	56.00
19.5	476.60	.20	56.00
19.6	238.75	.20	56.00
19.7	116.60	.20	56.00
19.8A	733.70	.20	56.00
19.8B	20.80	.20	69.00
1.16C	313.10	.20	56.00
1.16D	275.50	.20	69.00
117A	36.00	.90	69.00
117B	142.30	.30	56.00
117C	5.30	.90	69.00
117D	133.14	.30	56.00

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	46.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34
1.13	180.71	.00	56.00	75.80	.42
1.13	45.18	1.00	98.00	98.00	.00
1.13	225.89	.20			.34
1.14	62.44	.00	56.00	75.80	.42
1.14	15.61	1.00	98.00	98.00	.00
1.14	78.05	.20			.34
1.41	5.50	.00	91.00	98.20	.06
1.42A	22.10	.00	86.00	97.20	.11
1.42B	1.70	.00	91.00	98.20	.06
1.43A	83.60	.00	86.00	97.20	.11
1.43B	11.10	.00	91.00	98.20	.06
1.44A	44.90	.00	86.00	97.20	.11

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.44B	33.15	.00	91.00	98.20	.06
1.45A	67.95	.00	86.00	97.20	.11
1.45B	10.95	.00	91.00	98.20	.06
1.81	9.80	.00	91.00	98.20	.06
1.82A	33.90	.00	91.00	98.20	.06
18.82B	6.43	.00	86.00	97.20	.11
1.83	26.40	.00	91.00	98.20	.06
1.91	12.85	.00	91.00	98.20	.06
1.92	45.00	.00	91.00	98.20	.06
1.83B	7.40	.00	91.00	98.20	.06
1.84A	67.00	.00	91.00	98.20	.06
121	9.18	.00	91.00	98.20	.06
1.84B	68.80	.00	91.00	98.20	.06
1.45C	126.70	.00	91.00	98.20	.06
1.61	10.00	.00	86.00	97.20	.11
1.62	106.92	.00	86.00	97.20	.11
1.45D	65.19	.00	86.00	97.20	.11
1.45E	2.76	.00	91.00	98.20	.06
1.46A	47.75	.00	91.00	98.20	.06
17.1	7.05	.00	91.00	98.20	.06
17.2	75.30	.00	91.00	98.20	.06
1.46B	107.40	.00	91.00	98.20	.06
1.47A	12.48	.00	69.00	86.20	.29
1.47A	3.12	1.00	98.00	98.00	.00
1.47A	15.60	.20			.23
1.47B	101.00	.00	91.00	98.20	.06
1.48A	18.36	.00	56.00	75.80	.42
1.48A	4.59	1.00	98.00	98.00	.00
1.48A	22.95	.20			.34
1.48B	97.68	.00	69.00	86.20	.29
1.48B	24.42	1.00	98.00	98.00	.00
1.48B	122.10	.20			.23
1.48C	47.75	.00	91.00	98.20	.06
1.49A	100.00	.00	56.00	75.80	.42
1.49A	25.00	1.00	98.00	98.00	.00
1.49A	125.00	.20			.34
1.49B	14.36	.00	69.00	86.20	.29
1.49B	3.59	1.00	98.00	98.00	.00
1.49B	17.95	.20			.23
1.49C	15.90	.00	91.00	98.20	.06
1.50	183.65	.00	91.00	98.20	.06

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51A	98.48	.00	56.00	75.80	.42
1.51A	24.62	1.00	98.00	98.00	.00
1.51A	123.10	.20			.34
10.1	10.00	.00	91.00	98.20	.06
10.2	116.80	.00	91.00	98.20	.06
10.3	158.00	.00	91.00	98.20	.06
10.4A	81.70	.00	91.00	98.20	.06
11.1	10.00	.00	91.00	98.20	.06
11.2	40.60	.00	91.00	98.20	.06
11.3	78.97	.00	91.00	98.20	.06
10.4B	101.00	.00	91.00	98.20	.06
10.5A	140.50	.00	91.00	98.20	.06
12.1	6.90	.00	91.00	98.20	.06
12.2	18.40	.00	91.00	98.20	.06
12.3	40.40	.00	91.00	98.20	.06
12.4	44.50	.00	91.00	98.20	.06
10.5B	97.30	.00	91.00	98.20	.06
10.6A	86.30	.00	91.00	98.20	.06
16.1	7.10	.00	91.00	98.20	.06
16.2	26.60	.00	91.00	98.20	.06
16.3	44.10	.00	91.00	98.20	.06
10.6B	58.30	.00	91.00	98.20	.06
10.7A	11.76	.00	56.00	75.80	.42
10.7A	2.94	1.00	98.00	98.00	.00
10.7A	14.70	.20			.34
10.7B	27.92	.00	69.00	86.20	.29
10.7B	6.98	1.00	98.00	98.00	.00
10.7B	34.90	.20			.23
10.7C	176.30	.00	91.00	98.20	.06
10.8A	66.85	.00	56.00	75.80	.42
10.8A	16.71	1.00	98.00	98.00	.00
10.8A	83.56	.20			.34
10.8B	59.52	.00	69.00	86.20	.29
10.8B	14.88	1.00	98.00	98.00	.00
10.8B	74.40	.20			.23
10.9A	112.72	.00	56.00	75.80	.42
10.9A	28.18	1.00	98.00	98.00	.00
10.9A	140.90	.20			.34
10.9B	56.24	.00	91.00	98.20	.06
10.9B	14.06	1.00	98.00	98.00	.00
10.9B	70.30	.20			.05

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51B	55.04	.00	56.00	75.80	.42
1.51B	13.76	1.00	98.00	98.00	.00
1.51B	68.80	.20			.34
1.51C	55.04	.00	69.00	86.20	.29
1.51C	13.76	1.00	98.00	98.00	.00
1.51C	68.80	.20			.23
1.52A	210.08	.00	56.00	75.80	.42
1.52A	52.52	1.00	98.00	98.00	.00
1.52A	262.60	.20			.34
1.52B	61.68	.00	69.00	86.20	.29
1.52B	15.42	1.00	98.00	98.00	.00
1.52B	77.10	.20			.23
1.53A	251.20	.00	56.00	75.80	.42
1.53A	62.80	1.00	98.00	98.00	.00
1.53A	314.00	.20			.34
1.53B	8.64	.00	69.00	86.20	.29
1.53B	2.16	1.00	98.00	98.00	.00
1.53B	10.80	.20			.23
14.1	7.90	.00	91.00	98.20	.06
14.2	42.24	.00	91.00	98.20	.06
14.3	50.50	.00	91.00	98.20	.06
14.4A	8.10	.00	86.00	97.20	.11
14.4B	24.80	.00	91.00	98.20	.06
15.1	4.60	.00	91.00	98.20	.06
15.2	47.75	.00	91.00	98.20	.06
15.3A	9.20	.00	86.00	97.20	.11
15.3B	76.20	.00	91.00	98.20	.06
14.4C	3.10	.00	86.00	97.20	.11
14.4D	6.20	.00	91.00	98.20	.06
14.5A	42.30	.00	86.00	97.20	.11
14.5B	22.00	.00	91.00	98.20	.06
14.6A	78.10	.00	86.00	97.20	.11
14.6B	24.80	.00	91.00	98.20	.06
14.6C	2.80	.00	56.00	75.80	.42
14.6C	.70	1.00	98.00	98.00	.00
14.6C	3.50	.20			.34
14.7A	3.80	.00	86.00	97.20	.11
14.7B	1.44	.00	69.00	86.20	.29
14.7B	.36	1.00	98.00	98.00	.00
14.7B	1.80	.20			.23
14.7C	128.56	.00	56.00	75.80	.42

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
14.7C	32.14	1.00	98.00	98.00	.00
14.7C	160.70	.20			.34
14.8A	23.52	.00	56.00	75.80	.42
14.8A	5.88	1.00	98.00	98.00	.00
14.8A	29.40	.20			.34
18.1	8.87	.00	91.00	98.20	.06
18.2	42.30	.00	91.00	98.20	.06
18.3	66.00	.00	91.00	98.20	.06
18.4A	75.30	.00	91.00	98.20	.06
18.4B	9.04	.00	69.00	86.20	.29
18.4B	2.26	1.00	98.00	98.00	.00
18.4B	11.30	.20			.23
18.5A	133.68	.00	69.00	86.20	.29
18.5A	33.42	1.00	98.00	98.00	.00
18.5A	167.10	.20			.23
18.5B	29.40	.00	91.00	98.20	.06
18.5C	11.76	.00	56.00	75.80	.42
18.5C	2.94	1.00	98.00	98.00	.00
18.5C	14.70	.20			.34
14.8B	11.24	.00	56.00	75.80	.42
14.8B	2.81	1.00	98.00	98.00	.00
14.8B	14.05	.20			.34
13.8A	24.96	.00	56.00	75.80	.42
13.8A	6.24	1.00	98.00	98.00	.00
13.8A	31.20	.20			.34
13.1	5.20	.00	91.00	98.20	.06
13.2	26.60	.00	91.00	98.20	.06
13.3	33.98	.00	91.00	98.20	.06
13.4A	35.00	.00	86.00	97.20	.11
13.4B	109.30	.00	91.00	98.20	.06
13.5A	127.60	.00	86.00	97.20	.11
13.5B	19.25	.00	91.00	98.20	.06
13.6A	192.80	.00	91.00	98.20	.06
13.6B	64.30	.00	86.00	97.20	.11
13.7A	107.98	.00	56.00	75.80	.42
13.7A	27.00	1.00	98.00	98.00	.00
13.7A	134.98	.20			.34
13.7B	12.00	.00	86.00	97.20	.11
13.7C	22.00	.00	91.00	98.20	.06
13.8B	41.20	.00	56.00	75.80	.42
13.8B	10.30	1.00	98.00	98.00	.00
13.8B	51.50	.20			.34

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.9	102.16	.00	56.00	75.80	.42
13.9	25.54	1.00	98.00	98.00	.00
13.9	127.70	.20			.34
13.10A	70.56	.00	56.00	75.80	.42
13.10A	17.64	1.00	98.00	98.00	.00
13.10A	88.20	.20			.34
13.10B	22.80	.00	69.00	86.20	.29
13.10B	5.70	1.00	98.00	98.00	.00
13.10B	28.50	.20			.23
13.11	65.36	.00	69.00	86.20	.29
13.11	16.34	1.00	98.00	98.00	.00
13.11	81.70	.20			.23
13.12A	49.92	.00	56.00	75.80	.42
13.12A	12.48	1.00	98.00	98.00	.00
13.12A	62.40	.20			.34
13.12B	12.56	.00	69.00	86.20	.29
13.12B	3.14	1.00	98.00	98.00	.00
13.12B	15.70	.20			.23
131	3.36	.00	69.00	86.20	.29
131	.84	1.00	98.00	98.00	.00
131	4.20	.20			.23
132	24.98	.00	69.00	86.20	.29
132	6.24	1.00	98.00	98.00	.00
132	31.22	.20			.23
133A	7.36	.00	69.00	86.20	.29
133A	1.84	1.00	98.00	98.00	.00
133A	9.20	.20			.23
133B	45.52	.00	56.00	75.80	.42
133B	11.38	1.00	98.00	98.00	.00
133B	56.90	.20			.34
134A	132.24	.00	69.00	86.20	.29
134A	33.06	1.00	98.00	98.00	.00
134A	165.30	.20			.23
134B	72.72	.00	56.00	75.80	.42
134B	18.18	1.00	98.00	98.00	.00
134B	90.90	.20			.34
135A	205.60	.00	69.00	86.20	.29
135A	51.40	1.00	98.00	98.00	.00
135A	257.00	.20			.23
135B	47.04	.00	56.00	75.80	.42
135B	11.76	1.00	98.00	98.00	.00
135B	58.80	.20			.34

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.12C	16.88	.00	69.00	86.20	.29
13.12C	4.22	1.00	98.00	98.00	.00
13.12C	21.10	.20			.23
13.12D	14.16	.00	56.00	75.80	.42
13.12D	3.54	1.00	98.00	98.00	.00
13.12D	17.70	.20			.34
1.53C	14.16	.00	56.00	75.80	.42
1.53C	3.54	1.00	98.00	98.00	.00
1.53C	17.70	.20			.34
1.14B	152.08	.00	56.00	75.80	.42
1.14B	38.02	1.00	98.00	98.00	.00
1.14B	190.10	.20			.34
1.15	334.25	.00	56.00	75.80	.42
1.15	83.56	1.00	98.00	98.00	.00
1.15	417.81	.20			.34
1.16A	58.77	.00	56.00	75.80	.42
1.16A	14.69	1.00	98.00	98.00	.00
1.16A	73.46	.20			.34
1.16B	58.03	.00	69.00	86.20	.29
1.16B	14.51	1.00	98.00	98.00	.00
1.16B	72.54	.20			.23
19.1A	1.92	.00	56.00	75.80	.42
19.1A	.48	1.00	98.00	98.00	.00
19.1A	2.40	.20			.34
19.1B	5.12	.00	69.00	86.20	.29
19.1B	1.28	1.00	98.00	98.00	.00
19.1B	6.40	.20			.23
19.2	11.04	.00	56.00	75.80	.42
19.2	2.76	1.00	98.00	98.00	.00
19.2	13.80	.20			.34
19.3A	64.64	.00	56.00	75.80	.42
19.3A	16.16	1.00	98.00	98.00	.00
19.3A	80.80	.20			.34
19.3B	8.80	.00	69.00	86.20	.29
19.3B	2.20	1.00	98.00	98.00	.00
19.3B	11.00	.20			.23
19.4	174.80	.00	56.00	75.80	.42
19.4	43.70	1.00	98.00	98.00	.00
19.4	218.50	.20			.34
19.5	381.28	.00	56.00	75.80	.42
19.5	95.32	1.00	98.00	98.00	.00
19.5	476.60	.20			.34

NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
19.6	191.00	.00	56.00	75.80	.42
19.6	47.75	1.00	98.00	98.00	.00
19.6	238.75	.20			.34
19.7	93.28	.00	56.00	75.80	.42
19.7	23.32	1.00	98.00	98.00	.00
19.7	116.60	.20			.34
19.8A	586.96	.00	56.00	75.80	.42
19.8A	146.74	1.00	98.00	98.00	.00
19.8A	733.70	.20			.34
19.8B	16.64	.00	69.00	86.20	.29
19.8B	4.16	1.00	98.00	98.00	.00
19.8B	20.80	.20			.23
1.16C	250.48	.00	56.00	75.80	.42
1.16C	62.62	1.00	98.00	98.00	.00
1.16C	313.10	.20			.34
1.16D	220.40	.00	69.00	86.20	.29
1.16D	55.10	1.00	98.00	98.00	.00
1.16D	275.50	.20			.23
117A	3.60	.00	69.00	86.20	.29
117A	32.40	1.00	98.00	98.00	.00
117A	36.00	.90			.03
117B	99.61	.00	56.00	75.80	.42
117B	42.69	1.00	98.00	98.00	.00
117B	142.30	.30			.29
117C	.53	.00	69.00	86.20	.29
117C	4.77	1.00	98.00	98.00	.00
117C	5.30	.90			.03
117D	93.20	.00	56.00	75.80	.42
117D	39.94	1.00	98.00	98.00	.00
117D	133.14	.30			.29

NODE 1.17

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	14484.18
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.223
LOW LOSS FRACTION (Y BAR)	=	.246

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRATE PARAMETERS AT NODE 2.07, ADELANTO M.P.D.

LOSS RATE RAW INPUT DATA AT NODE 2.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00

LOSSRATE PARAMETERS AT NODE 2.07, ADELANTO M.P.D.

LOSS RATE PROCESSED INPUT DATA AT NODE 2.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18

1/7/90

LOSSRATE PARAMETERS AT NODE 2.07, ADELANTO M.P.D.

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	789.50
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.304
LOW LOSS FRACTION (Y BAR)	=	.319

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSS 2.09

LOSS RATE RAW INPUT DATA AT NODE 2.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00

LOSS 2.09

LOSS RATE PROCESSED INPUT DATA AT NODE 2.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

LOSS 2.09

LOSS RATE PROCESSED INPUT DATA AT NODE 2.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23

LOSS 2.09

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	1529.30
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.332
LOW LOSS FRACTION (Y BAR)	=	.360

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSS 2.11

LOSS RATE RAW INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

LOSS 2.11

LOSS RATE RAW INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

LOSS 2.11

LOSS RATE RAW INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00

LOSS 2.11

LOSS RATE PROCESSED INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

LOSS 2.11

LOSS RATE PROCESSED INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

LOSS 2.11

LOSS RATE PROCESSED INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

LOSS 2.11

LOSS RATE PROCESSED INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

LOSS 2.11

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	4047.60
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.242
LOW LOSS FRACTION (Y BAR)	=	.257

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSS 2.13

LOSS RATE RAW INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

LOSS 2.13

LOSS RATE RAW INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

LOSS 2.13

LOSS RATE RAW INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00
212A	267.30	.20	56.00
212B	153.30	.20	69.00
213A	28.10	.20	56.00
213B	14.10	.20	69.00

LOSS 2.13

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

LOSS 2.13

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

LOSS 2.13

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

LOSS 2.13

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

LOSS 2.13

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
212A	213.84	.00	56.00	75.80	.42
212A	53.46	1.00	98.00	98.00	.00
212A	267.30	.20			.34
212B	122.64	.00	69.00	86.20	.29
212B	30.66	1.00	98.00	98.00	.00
212B	153.30	.20			.23
213A	22.48	.00	56.00	75.80	.42
213A	5.62	1.00	98.00	98.00	.00
213A	28.10	.20			.34
213B	11.28	.00	69.00	86.20	.29
213B	2.82	1.00	98.00	98.00	.00
213B	14.10	.20			.23

LOSS 2.13

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	4510.40
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.248
LOW LOSS FRACTION (Y BAR)	=	.265

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSS 2.15

LOSS RATE RAW INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

LOSS 2.15

LOSS RATE RAW INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

LOSS 2.15

LOSS RATE RAW INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00
212A	267.30	.20	56.00
212B	153.30	.20	69.00
213A	28.10	.20	56.00
213B	14.10	.20	69.00
214	63.40	.20	56.00
215A	106.50	.20	56.00
21	5.50	.20	56.00
22A	23.90	.20	56.00
22B	11.00	.20	69.00
23	20.30	.20	56.00
23B	66.00	.20	69.00
24	202.10	.20	69.00
25	81.70	.20	69.00
26A	62.20	.20	56.00
26B	89.30	.20	69.00
215B	7.30	.20	69.00
215C	83.60	.20	56.00

LOSS 2.15

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

LOSS 2.15

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

LOSS 2.15

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

LOSS 2.15

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

LOSS 2.15

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
212A	213.84	.00	56.00	75.80	.42
212A	53.46	1.00	98.00	98.00	.00
212A	267.30	.20			.34
212B	122.64	.00	69.00	86.20	.29
212B	30.66	1.00	98.00	98.00	.00
212B	153.30	.20			.23
213A	22.48	.00	56.00	75.80	.42
213A	5.62	1.00	98.00	98.00	.00
213A	28.10	.20			.34
213B	11.28	.00	69.00	86.20	.29
213B	2.82	1.00	98.00	98.00	.00
213B	14.10	.20			.23
214	50.72	.00	56.00	75.80	.42
214	12.68	1.00	98.00	98.00	.00
214	63.40	.20			.34
215A	85.20	.00	56.00	75.80	.42
215A	21.30	1.00	98.00	98.00	.00
215A	106.50	.20			.34
21	4.40	.00	56.00	75.80	.42
21	1.10	1.00	98.00	98.00	.00
21	5.50	.20			.34
22A	19.12	.00	56.00	75.80	.42
22A	4.78	1.00	98.00	98.00	.00
22A	23.90	.20			.34
22B	8.80	.00	69.00	86.20	.29
22B	2.20	1.00	98.00	98.00	.00
22B	11.00	.20			.23
23	16.24	.00	56.00	75.80	.42
23	4.06	1.00	98.00	98.00	.00
23	20.30	.20			.34
23B	52.80	.00	69.00	86.20	.29
23B	13.20	1.00	98.00	98.00	.00
23B	66.00	.20			.23
24	161.68	.00	69.00	86.20	.29
24	40.42	1.00	98.00	98.00	.00
24	202.10	.20			.23
25	65.36	.00	69.00	86.20	.29
25	16.34	1.00	98.00	98.00	.00
25	81.70	.20			.23
26A	49.76	.00	56.00	75.80	.42
26A	12.44	1.00	98.00	98.00	.00
26A	62.20	.20			.34

LOSS 2.15

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
26B	71.44	.00	69.00	86.20	.29
26B	17.86	1.00	98.00	98.00	.00
26B	89.30	.20			.23
215B	5.84	.00	69.00	86.20	.29
215B	1.46	1.00	98.00	98.00	.00
215B	7.30	.20			.23
215C	66.88	.00	56.00	75.80	.42
215C	16.72	1.00	98.00	98.00	.00
215C	83.60	.20			.34

LOSS 2.15

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	5333.20
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.252
LOW LOSS FRACTION (Y BAR)	=	.273

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSS 2.17

LOSS RATE RAW INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

LOSS 2.17

LOSS RATE RAW INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

LOSS 2.17

LOSS RATE RAW INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00
212A	267.30	.20	56.00
212B	153.30	.20	69.00
213A	28.10	.20	56.00
213B	14.10	.20	69.00
214	63.40	.20	56.00
215A	106.50	.20	56.00
21	5.50	.20	56.00
22A	23.90	.20	56.00
22B	11.00	.20	69.00
23	20.30	.20	56.00
23B	66.00	.20	69.00
24	202.10	.20	69.00
25	81.70	.20	69.00
26A	62.20	.20	56.00
26B	89.30	.20	69.00
215B	7.30	.20	69.00
215C	83.60	.20	56.00
216	78.80	.20	56.00
217A	68.00	.20	56.00
217B	44.10	.20	69.00
281	3.00	.00	86.00
282	12.20	.00	86.00
283	51.90	.00	86.00
284A	63.30	.00	86.00
284B	10.70	.00	91.00
284C	11.40	.20	69.00
284D	169.00	.00	86.00
285A	6.40	.00	91.00

LOSS 2.17

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

LOSS 2.17

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

LOSS 2.17

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

LOSS 2.17

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-ll	RUNOFF CURVE NO. AMC-lll	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

LOSS 2.17

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
212A	213.84	.00	56.00	75.80	.42
212A	53.46	1.00	98.00	98.00	.00
212A	267.30	.20			.34
212B	122.64	.00	69.00	86.20	.29
212B	30.66	1.00	98.00	98.00	.00
212B	153.30	.20			.23
213A	22.48	.00	56.00	75.80	.42
213A	5.62	1.00	98.00	98.00	.00
213A	28.10	.20			.34
213B	11.28	.00	69.00	86.20	.29
213B	2.82	1.00	98.00	98.00	.00
213B	14.10	.20			.23
214	50.72	.00	56.00	75.80	.42
214	12.68	1.00	98.00	98.00	.00
214	63.40	.20			.34
215A	85.20	.00	56.00	75.80	.42
215A	21.30	1.00	98.00	98.00	.00
215A	106.50	.20			.34
21	4.40	.00	56.00	75.80	.42
21	1.10	1.00	98.00	98.00	.00
21	5.50	.20			.34
22A	19.12	.00	56.00	75.80	.42
22A	4.78	1.00	98.00	98.00	.00
22A	23.90	.20			.34
22B	8.80	.00	69.00	86.20	.29
22B	2.20	1.00	98.00	98.00	.00
22B	11.00	.20			.23
23	16.24	.00	56.00	75.80	.42
23	4.06	1.00	98.00	98.00	.00
23	20.30	.20			.34
23B	52.80	.00	69.00	86.20	.29
23B	13.20	1.00	98.00	98.00	.00
23B	66.00	.20			.23
24	161.68	.00	69.00	86.20	.29
24	40.42	1.00	98.00	98.00	.00
24	202.10	.20			.23
25	65.36	.00	69.00	86.20	.29
25	16.34	1.00	98.00	98.00	.00
25	81.70	.20			.23
26A	49.76	.00	56.00	75.80	.42
26A	12.44	1.00	98.00	98.00	.00
26A	62.20	.20			.34

LOSS 2.17

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
26B	71.44	.00	69.00	86.20	.29
26B	17.86	1.00	98.00	98.00	.00
26B	89.30	.20			.23
215B	5.84	.00	69.00	86.20	.29
215B	1.46	1.00	98.00	98.00	.00
215B	7.30	.20			.23
215C	66.88	.00	56.00	75.80	.42
215C	16.72	1.00	98.00	98.00	.00
215C	83.60	.20			.34
216	63.04	.00	56.00	75.80	.42
216	15.76	1.00	98.00	98.00	.00
216	78.80	.20			.34
217A	54.40	.00	56.00	75.80	.42
217A	13.60	1.00	98.00	98.00	.00
217A	68.00	.20			.34
217B	35.28	.00	69.00	86.20	.29
217B	8.82	1.00	98.00	98.00	.00
217B	44.10	.20			.23
281	3.00	.00	86.00	97.20	.11
282	12.20	.00	86.00	97.20	.11
283	51.90	.00	86.00	97.20	.11
284A	63.30	.00	86.00	97.20	.11
284B	10.70	.00	91.00	98.20	.06
284C	9.12	.00	69.00	86.20	.29
284C	2.28	1.00	98.00	98.00	.00
284C	11.40	.20			.23
284D	169.00	.00	86.00	97.20	.11
285A	6.40	.00	91.00	98.20	.06

LOSS 2.17

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	5852.00
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.246
LOW LOSS FRACTION (Y BAR)	=	.264

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00
212A	267.30	.20	56.00
212B	153.30	.20	69.00
213A	28.10	.20	56.00
213B	14.10	.20	69.00
214	63.40	.20	56.00
215A	106.50	.20	56.00
21	5.50	.20	56.00
22A	23.90	.20	56.00
22B	11.00	.20	69.00
23	20.30	.20	56.00
23B	66.00	.20	69.00
24	202.10	.20	69.00
25	81.70	.20	69.00
26A	62.20	.20	56.00
26B	89.30	.20	69.00
215B	7.30	.20	69.00
215C	83.60	.20	56.00
216	78.80	.20	56.00
217A	68.00	.20	56.00
217B	44.10	.20	69.00
281	3.00	.00	86.00
282	12.20	.00	86.00
283	51.90	.00	86.00
284A	63.30	.00	86.00
284B	10.70	.00	91.00
284C	11.40	.20	69.00
284D	169.00	.00	86.00
285A	6.40	.00	91.00

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
285B	92.80	.20	69.00
286A	16.50	.00	86.00
286B	720.00	.20	69.00
287A	154.70	.20	56.00
287B	40.20	.20	69.00
288	316.80	.20	56.00
289	258.90	.20	56.00
217A	202.10	.20	56.00
217B	18.20	.20	69.00
117A	75.60	.30	56.00
117B	68.90	.30	69.00
117C	6.10	.15	65.00

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
212A	213.84	.00	56.00	75.80	.42
212A	53.46	1.00	98.00	98.00	.00
212A	267.30	.20			.34
212B	122.64	.00	69.00	86.20	.29
212B	30.66	1.00	98.00	98.00	.00
212B	153.30	.20			.23
213A	22.48	.00	56.00	75.80	.42
213A	5.62	1.00	98.00	98.00	.00
213A	28.10	.20			.34
213B	11.28	.00	69.00	86.20	.29
213B	2.82	1.00	98.00	98.00	.00
213B	14.10	.20			.23
214	50.72	.00	56.00	75.80	.42
214	12.68	1.00	98.00	98.00	.00
214	63.40	.20			.34
215A	85.20	.00	56.00	75.80	.42
215A	21.30	1.00	98.00	98.00	.00
215A	106.50	.20			.34
21	4.40	.00	56.00	75.80	.42
21	1.10	1.00	98.00	98.00	.00
21	5.50	.20			.34
22A	19.12	.00	56.00	75.80	.42
22A	4.78	1.00	98.00	98.00	.00
22A	23.90	.20			.34
22B	8.80	.00	69.00	86.20	.29
22B	2.20	1.00	98.00	98.00	.00
22B	11.00	.20			.23
23	16.24	.00	56.00	75.80	.42
23	4.06	1.00	98.00	98.00	.00
23	20.30	.20			.34
23B	52.80	.00	69.00	86.20	.29
23B	13.20	1.00	98.00	98.00	.00
23B	66.00	.20			.23
24	161.68	.00	69.00	86.20	.29
24	40.42	1.00	98.00	98.00	.00
24	202.10	.20			.23
25	65.36	.00	69.00	86.20	.29
25	16.34	1.00	98.00	98.00	.00
25	81.70	.20			.23
26A	49.76	.00	56.00	75.80	.42
26A	12.44	1.00	98.00	98.00	.00
26A	62.20	.20			.34

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
26B	71.44	.00	69.00	86.20	.29
26B	17.86	1.00	98.00	98.00	.00
26B	89.30	.20			.23
215B	5.84	.00	69.00	86.20	.29
215B	1.46	1.00	98.00	98.00	.00
215B	7.30	.20			.23
215C	66.88	.00	56.00	75.80	.42
215C	16.72	1.00	98.00	98.00	.00
215C	83.60	.20			.34
216	63.04	.00	56.00	75.80	.42
216	15.76	1.00	98.00	98.00	.00
216	78.80	.20			.34
217A	54.40	.00	56.00	75.80	.42
217A	13.60	1.00	98.00	98.00	.00
217A	68.00	.20			.34
217B	35.28	.00	69.00	86.20	.29
217B	8.82	1.00	98.00	98.00	.00
217B	44.10	.20			.23
281	3.00	.00	86.00	97.20	.11
282	12.20	.00	86.00	97.20	.11
283	51.90	.00	86.00	97.20	.11
284A	63.30	.00	86.00	97.20	.11
284B	10.70	.00	91.00	98.20	.06
284C	9.12	.00	69.00	86.20	.29
284C	2.28	1.00	98.00	98.00	.00
284C	11.40	.20			.23
284D	169.00	.00	86.00	97.20	.11
285A	6.40	.00	91.00	98.20	.06
285B	74.24	.00	69.00	86.20	.29
285B	18.56	1.00	98.00	98.00	.00
285B	92.80	.20			.23
286A	16.50	.00	86.00	97.20	.11
286B	576.00	.00	69.00	86.20	.29
286B	144.00	1.00	98.00	98.00	.00
286B	720.00	.20			.23
287A	123.76	.00	56.00	75.80	.42
287A	30.94	1.00	98.00	98.00	.00
287A	154.70	.20			.34
287B	32.16	.00	69.00	86.20	.29
287B	8.04	1.00	98.00	98.00	.00
287B	40.20	.20			.23

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
288	253.44	.00	56.00	75.80	.42
288	63.36	1.00	98.00	98.00	.00
288	316.80	.20			.34
289	207.12	.00	56.00	75.80	.42
289	51.78	1.00	98.00	98.00	.00
289	258.90	.20			.34
217A	161.68	.00	56.00	75.80	.42
217A	40.42	1.00	98.00	98.00	.00
217A	202.10	.20			.34
217B	14.56	.00	69.00	86.20	.29
217B	3.64	1.00	98.00	98.00	.00
217B	18.20	.20			.23
117A	52.92	.00	56.00	75.80	.42
117A	22.68	1.00	98.00	98.00	.00
117A	75.60	.30			.29
117B	48.23	.00	69.00	86.20	.29
117B	20.67	1.00	98.00	98.00	.00
117B	68.90	.30			.20
117C	5.18	.00	65.00	83.00	.31
117C	.92	1.00	98.00	98.00	.00
117C	6.10	.15			.27

LOSS RATE PARAMETERS FOR WATERSHED 2 AT NODE 1.17

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	7822.80
24-HOUR RAIN (INCHES)	=	5.190
LOSS RATE FM (INCHES/HOUR)	=	.255
LOW LOSS FRACTION (Y BAR)	=	.278

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

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            F L O O D    R O U T I N G    A N A L Y S I S
     USING ORANGE/SAN BERNARDINO COUNTY UNIT-HYDROGRAPH (1986 MANUAL)
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                          Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                           DESIGN NODE 1.17                             *
*                  HYDROGRAPH AT NODE 1.05 ROUTED TO NODE 1.07           *
*                                                                        *
 **************************************************************************

  FILE NAME: H105-117.INP
  TIME/DATE OF STUDY:  7:19   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.05 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =     706.420 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =     .466 HOURS
         CAUTION: LAG TIME IS LESS THAN  .50 HOURS.
         THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
         MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .700
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .092
        LOW LOSS FRACTION =  .057
        *HYDROGRAPH MODEL #1 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
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24-HOUR FACTOR = .966

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 17.883

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.803	154.067
2	6.750	422.642
3	15.256	726.658
4	27.465	1043.018
5	38.542	946.321
6	48.721	869.669
7	55.812	605.798
8	60.786	424.937
9	64.766	340.015
10	67.977	274.310
11	70.726	234.909
12	73.192	210.643
13	75.381	187.006
14	77.327	166.240
15	79.064	148.455
16	80.624	133.206
17	82.040	121.037
18	83.292	106.933
19	84.427	96.969
20	85.455	87.817
21	86.358	77.155
22	87.217	73.403
23	88.021	68.692
24	88.679	56.160
25	89.323	55.002
26	89.954	53.929
27	90.562	51.990
28	91.170	51.937
29	91.707	45.842
30	92.188	41.063
31	92.667	40.958
32	93.122	38.897
33	93.567	37.991
34	94.006	37.496
35	94.399	33.596
36	94.777	32.297
37	95.133	30.380
38	95.462	28.135
39	95.789	27.949
40	96.098	26.404
41	96.376	23.714
42	96.653	23.687
43	96.944	24.863
44	97.246	25.830

45	97.543	25.373
46	97.716	14.712
47	97.841	10.699
48	97.966	10.686
49	98.091	10.712
50	98.216	10.686
51	98.341	10.686
52	98.467	10.712
53	98.592	10.686
54	98.717	10.686
55	98.842	10.712
56	98.967	10.660
57	99.054	7.419
58	99.113	5.042
59	99.172	5.016
60	99.231	5.069
61	99.290	5.068
62	99.356	5.643
63	99.416	5.068
64	99.475	5.069
65	99.534	5.068
66	99.594	5.068
67	99.653	5.069
68	99.712	5.068
69	99.772	5.068
70	99.831	5.069
71	99.890	5.068
72	99.950	5.068
73	100.000	4.295

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = .27
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.74

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 16.1706
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 278.8240

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 175.0 350.0 525.0 700.0
16.083	153.8403	356.72	. . Q V . .
16.167	157.0119	460.51	. . . V Q . .
16.250	160.9046	565.21	. . . V . Q .
16.333	165.3896	651.22	. . . V . Q .
16.417	169.6315	615.92	. . . V . Q .
16.500	173.6096	577.62	. . . V . Q .
16.583	177.0248	495.89	. . . V Q . .
16.667	180.1067	447.50	. . . Q . . .
16.750	183.0445	426.56	. . . Q V . .
16.833	185.8907	413.28	. . . Q V . .
16.917	188.6677	403.21	. . . Q V . .
17.000	191.3843	394.45	. . . Q V . .
17.083	194.0207	382.81	. . .Q V . .
17.167	196.5491	367.12	. . Q V . .
17.250	198.9418	347.42	. . Q. V . .
17.333	201.1718	323.80	. . Q . V . .
17.417	203.2524	302.11	. . Q . V. .
17.500	205.1874	280.96	. . Q . V. .
17.583	207.0112	264.82	. . Q . V. .
17.667	208.7443	251.65	. . Q . V. .
17.750	210.3957	239.78	. . Q . V .
17.833	211.9839	230.62	. . Q . V .
17.917	213.5111	221.74	. . Q . V .
18.000	214.9684	211.61	. . Q . V .
18.083	216.3819	205.23	. .Q . .V .
18.167	217.7585	199.88	. .Q . .V .
18.250	219.1031	195.24	. .Q . .V .
18.333	220.4223	191.54	. Q . .V .
18.417	221.7066	186.48	. Q . .V .
18.500	222.9613	182.18	. Q . .V .
18.583	224.1939	178.98	. Q . . V .
18.667	225.4015	175.35	. Q . . V .
18.750	226.5862	172.02	. Q. . . V .
18.833	227.7475	168.61	. Q. . . V .
18.917	228.8799	164.43	. Q. . . V .
19.000	229.9893	161.08	. Q. . . V .
19.083	231.0752	157.68	. Q. . . V .
19.167	232.1399	154.59	. Q . . . V .
19.250	233.1875	152.10	. Q . . . V .
19.333	234.2155	149.27	. Q . . . V .
19.417	235.2233	146.33	. Q . . . V .
19.500	236.2164	144.20	. Q . . . V .
19.583	237.1971	142.40	. Q . . . V .
19.667	238.1636	140.34	. Q . . . V .
19.750	239.1109	137.55	. Q . . . V .
19.833	240.0218	132.26	. Q . . . V .
19.917	240.9108	129.08	. Q . . . V .
20.000	241.7871	127.23	. Q . . . V .

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*******************************************************************************
 FLOW PROCESS FROM NODE     1.05 TO NODE     1.07 IS CODE =  52
-------------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
===============================================================================

      THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
      TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
      INTERVALS(Reference: the National Engineering Handbook,
      Hydrology, Chapter 17, page 17-52, August,1972,
      U.S. Department of Commerce).


      ASSUMED REGULAR CHANNEL INFORMATION:
        BASEWIDTH(FT) =   20.00     CHANNEL Z =  3.00
        UPSTREAM ELEVATION =    4120.00
        DOWNSTREAM ELEVATION =    3840.00
        CHANNEL LENGTH(FT) =    9900.00     MANNING'S FACTOR =  .045
        CONSTANT LOSS RATE(CFS) =     .00


      CHANNEL ROUTING COEFFICIENT ESTIMATED:
        MAXIMUM INFLOW(CFS) =   651.22
        AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   460.36
        CHANNEL NORMAL VELOCITY FOR Q =   460.36 CFS =   7.98 FPS
        ESTIMATED CHANNEL ROUTING COEFFICIENT =  .824

      MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
      UNIT INTERVALS IS CSTAR =  .602


      CONVEX METHOD CHANNEL ROUTING RESULTS:
                                        OUTFLOW LESS
       MODEL        INFLOW     ROUTED      LOSS
        TIME      (STREAM 1)    FLOW     (STREAM 1)
       (HRS)       (CFS)       (CFS)       (CFS)
       14.083        162.2       150.2       150.2
       14.167        171.3       152.4       152.4
       14.250        185.0       154.7       154.7
       14.333        203.5       158.0       158.0
       14.417        220.6       163.8       163.8
       14.500        236.5       173.2       173.2
       14.583        248.5       186.9       186.9
       14.667        258.0       203.0       203.0
       14.750        266.2       219.2       219.2
       14.833        273.6       233.9       233.9
       14.917        280.6       246.1       246.1
       15.000        287.4       256.1       256.1
       15.083        294.1       264.8       264.8
       15.167        300.8       272.6       272.6
       15.250        307.5       279.8       279.8
       15.333        314.4       286.8       286.8
       15.417        317.5       293.5       293.5
       15.500        314.1       300.3       300.3
       15.583        303.7       307.1       307.1
       15.667        286.3       312.6       312.6
       15.750        273.3       314.3       314.3
       15.833        265.1       310.5       310.5
       15.917        268.8       300.2       300.2
       16.000        287.4       287.2       287.2
       16.083        356.7       275.9       275.9
       16.167        460.5       270.7       270.7
```

16.250	565.2	276.2	276.2
16.333	651.2	307.6	307.6
16.417	615.9	374.1	374.1
16.500	577.6	463.4	463.4
16.583	495.9	555.2	555.2
16.667	447.5	600.4	600.4
16.750	426.6	596.1	596.1
16.833	413.3	555.9	555.9
16.917	403.2	502.6	502.6
17.000	394.4	462.0	462.0
17.083	382.8	435.9	435.9
17.167	367.1	418.7	418.7
17.250	347.4	406.3	406.3
17.333	323.8	395.0	395.0
17.417	302.1	382.1	382.1
17.500	281.0	366.1	366.1
17.583	264.8	346.4	346.4
17.667	251.6	325.1	325.1
17.750	239.8	303.7	303.7
17.833	230.6	284.3	284.3
17.917	221.7	267.9	267.9
18.000	211.6	253.9	253.9
18.083	205.2	242.1	242.1
18.167	199.9	232.0	232.0
18.250	195.2	222.2	222.2
18.333	191.5	213.6	213.6
18.417	186.5	206.7	206.7
18.500	182.2	200.9	200.9
18.583	179.0	196.2	196.2
18.667	175.4	191.6	191.6
18.750	172.0	187.0	187.0
18.833	168.6	183.0	183.0
18.917	164.4	179.3	179.3
19.000	161.1	175.7	175.7

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 278.824 AF

OUTFLOW VOLUME = 278.824 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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          F L O O D   R O U T I N G   A N A L Y S I S
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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.17                             *
*                  HYDROGRAPH AT NODE 1.07 ROUTED TO NODE 1.09          *
*                                                                       *
 *************************************************************************

  FILE NAME: H107-117.INP
  TIME/DATE OF STUDY:  7:24   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.07 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =     940.110 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =     .811 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .600
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .123
        LOW LOSS FRACTION =  .099
        *HYDROGRAPH MODEL #1 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 10.275

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.968	110.066
2	3.044	236.036
3	5.956	331.101
4	9.737	429.827
5	15.463	651.024
6	22.291	776.263
7	29.332	800.606
8	35.655	718.891
9	41.724	689.937
10	48.400	759.009
11	53.382	566.471
12	57.412	458.145
13	60.795	384.652
14	63.700	330.345
15	66.265	291.597
16	68.403	243.134
17	70.339	220.110
18	72.056	195.110
19	73.608	176.513
20	75.083	167.740
21	76.373	146.643
22	77.603	139.863
23	78.731	128.173
24	79.753	116.280
25	80.718	109.703
26	81.572	97.090
27	82.415	95.809
28	83.190	88.159
29	83.937	84.909
30	84.646	80.596
31	85.278	71.832
32	85.902	71.013
33	86.473	64.836
34	87.024	62.628
35	87.522	56.674
36	87.972	51.180
37	88.420	50.909
38	88.854	49.328
39	89.285	49.024
40	89.657	42.284
41	89.984	37.155
42	90.311	37.159
43	90.637	37.139
44	90.964	37.107
45	91.278	35.716
46	91.586	35.052
47	91.894	35.042

48	92.202	35.036
49	92.507	34.601
50	92.762	29.026
51	93.004	27.495
52	93.246	27.488
53	93.487	27.495
54	93.727	27.263
55	93.953	25.674
56	94.176	25.362
57	94.399	25.389
58	94.623	25.421
59	94.841	24.741
60	95.035	22.133
61	95.228	21.907
62	95.420	21.868
63	95.613	21.895
64	95.794	20.589
65	95.958	18.633
66	96.121	18.580
67	96.285	18.581
68	96.448	18.588
69	96.602	17.466
70	96.741	15.806
71	96.880	15.780
72	97.018	15.754
73	97.157	15.780
74	97.302	16.481
75	97.453	17.180
76	97.604	17.155
77	97.755	17.181
78	97.906	17.102
79	98.000	10.728
80	98.062	7.003
81	98.123	6.975
82	98.185	7.054
83	98.246	7.003
84	98.308	7.001
85	98.370	7.003
86	98.431	7.002
87	98.493	7.002
88	98.555	7.054
89	98.616	7.002
90	98.678	6.951
91	98.740	7.053
92	98.801	7.002
93	98.863	7.054
94	98.924	6.950
95	98.986	7.054
96	99.048	6.951
97	99.110	7.053
98	99.164	6.173
99	99.194	3.424
100	99.223	3.319
101	99.252	3.320
102	99.281	3.268
103	99.310	3.320
104	99.340	3.320
105	99.368	3.267
106	99.398	3.372
107	99.431	3.734
108	99.460	3.372
109	99.490	3.372

110	99.520	3.372
111	99.549	3.371
112	99.579	3.372
113	99.609	3.372
114	99.638	3.372
115	99.668	3.372
116	99.698	3.371
117	99.727	3.372
118	99.757	3.372
119	99.787	3.372
120	99.816	3.372
121	99.846	3.371
122	99.876	3.372
123	99.905	3.372
124	99.935	3.372
125	99.965	3.372
126	99.994	3.371
127	100.000	.664

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = .47
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.54

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 37.1366
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 355.4529

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
16.083	182.0759	390.55			V Q		
16.167	185.0427	430.78			V Q		
16.250	188.2697	468.56			.V Q		
16.333	191.7865	510.63			.V Q.		
16.417	195.8000	582.77			. V . Q		
16.500	200.0986	624.15			. V . Q		
16.583	204.4505	631.90			. V . Q		
16.667	208.6610	611.36			. V . Q		
16.750	212.8387	606.61			. V . Q		
16.833	217.1248	622.35			. V . Q		
16.917	221.0418	568.75			. V . Q		
17.000	224.7296	535.47			. V Q		
17.083	228.2535	511.66			. V Q.		
17.167	231.6613	494.82			. V Q .		
17.250	234.9505	477.58			. VQ .		
17.333	238.0880	455.57			. Q .		
17.417	241.0934	436.38			. Q V .		
17.500	243.9512	414.95			. Q V .		
17.583	246.6695	394.70			. Q V .		
17.667	249.2697	377.54			.Q V .		
17.750	251.7334	357.74			Q V .		
17.833	254.0781	340.45			Q. V .		
17.917	256.3148	324.77			Q . V .		
18.000	258.4551	310.78			Q . V.		
18.083	260.5169	299.37			Q . V.		
18.167	262.4986	287.74			Q . V.		
18.250	264.4262	279.88			Q . V.		
18.333	266.2956	271.43			Q . V.		
18.417	268.1194	264.82			Q . V		
18.500	269.8989	258.38			Q . V		
18.583	271.6301	251.37			Q . V		
18.667	273.3283	246.58			Q . V		
18.750	274.9876	240.94			Q . V		
18.833	276.6165	236.52			Q . .V		
18.917	278.2074	231.00			Q . .V		
19.000	279.7630	225.87			Q . .V		
19.083	281.2932	222.19			Q . .V		
19.167	282.7969	218.35			Q . .V		
19.250	284.2749	214.60			Q . .V		
19.333	285.7157	209.21			.Q . . V		
19.417	287.1245	204.54			.Q . . V		
19.500	288.5128	201.59			.Q . . V		
19.583	289.8828	198.92			.Q . . V		
19.667	291.2337	196.16			.Q . . V		
19.750	292.5633	193.05			.Q . . V		
19.833	293.8734	190.22			Q . . V		
19.917	295.1663	187.74			Q . . V		
20.000	296.4424	185.29			Q . . V		

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**************************************************************************
 FLOW PROCESS FROM NODE     1.07 TO NODE     1.09 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   25.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3840.00
          DOWNSTREAM ELEVATION =    3640.00
          CHANNEL LENGTH(FT) =    9000.00     MANNING'S FACTOR =  .040
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =   631.90
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   437.33
          CHANNEL NORMAL VELOCITY FOR Q =   437.33 CFS =   7.50 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .815

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .597


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
         MODEL        INFLOW     ROUTED      LOSS
          TIME      (STREAM 1)    FLOW     (STREAM 1)
         (HRS)       (CFS)       (CFS)       (CFS)
         14.083        192.2       180.8       180.8
         14.167        198.5       183.2       183.2
         14.250        206.2       185.6       185.6
         14.333        215.4       188.9       188.9
         14.417        227.9       193.6       193.6
         14.500        242.3       199.9       199.9
         14.583        257.2       207.7       207.7
         14.667        270.9       217.8       217.8
         14.750        284.3       230.2       230.2
         14.833        298.8       244.0       244.0
         14.917        310.7       257.9       257.9
         15.000        321.2       271.6       271.6
         15.083        330.8       285.6       285.6
         15.167        339.8       298.7       298.7
         15.250        348.6       310.5       310.5
         15.333        357.0       321.1       321.1
         15.417        362.7       330.9       330.9
         15.500        365.5       340.1       340.1
         15.583        366.3       348.9       348.9
         15.667        365.5       356.3       356.3
         15.750        360.1       361.3       361.3
         15.833        353.4       364.2       364.2
         15.917        349.4       365.1       365.1
         16.000        353.5       363.0       363.0
         16.083        390.6       358.3       358.3
         16.167        430.8       353.6       353.6
```

16.250	468.6	352.9	352.9
16.333	510.6	369.6	369.6
16.417	582.8	399.8	399.8
16.500	624.2	434.9	434.9
16.583	631.9	473.5	473.5
16.667	611.4	527.5	527.5
16.750	606.6	578.7	578.7
16.833	622.3	609.2	609.2
16.917	568.7	613.7	613.7
17.000	535.5	610.2	610.2
17.083	511.7	615.0	615.0
17.167	494.8	595.8	595.8
17.250	477.6	565.0	565.0
17.333	455.6	536.9	536.9
17.417	436.4	514.4	514.4
17.500	415.0	495.1	495.1
17.583	394.7	475.0	475.0
17.667	377.5	454.9	454.9
17.750	357.7	434.4	434.4
17.833	340.5	413.9	413.9
17.917	324.8	394.9	394.9
18.000	310.8	375.8	375.8
18.083	299.4	357.4	357.4
18.167	287.7	340.4	340.4
18.250	279.9	324.9	324.9
18.333	271.4	311.4	311.4
18.417	264.8	299.1	299.1
18.500	258.4	288.9	288.9
18.583	251.4	279.8	279.8
18.667	246.6	271.9	271.9
18.750	240.9	264.8	264.8
18.833	236.5	257.9	257.9
18.917	231.0	251.9	251.9
19.000	225.9	246.2	246.2

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 355.453 AF

OUTFLOW VOLUME = 355.453 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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            F L O O D    R O U T I N G    A N A L Y S I S
     USING ORANGE/SAN BERNARDINO COUNTY UNIT-HYDROGRAPH (1986 MANUAL)
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                        Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.17                              *
*                  HYDROGAPH AT NODE 1.09 ROUTED TO NODE 1.12            *
*                                                                        *
 **************************************************************************

  FILE NAME: H109-117.INP
  TIME/DATE OF STUDY:  7:30   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.09 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    2338.360 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.144 HOURS
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .500
        VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .202
        LOW LOSS FRACTION =  .187
        *HYDROGRAPH MODEL #2 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
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UNIT INTERVAL PERCENTAGE OF LAG-TIME = 14.569

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.322	186.871
2	4.615	465.644
3	9.685	716.893
4	17.743	1139.424
5	27.282	1348.771
6	36.336	1280.289
7	46.108	1381.663
8	54.222	1147.345
9	59.921	805.726
10	64.382	630.806
11	68.027	515.465
12	70.959	414.610
13	73.449	351.992
14	75.655	311.935
15	77.557	268.978
16	79.282	243.902
17	80.786	212.672
18	82.135	190.682
19	83.341	170.544
20	84.452	157.110
21	85.491	146.896
22	86.404	129.170
23	87.263	121.451
24	88.046	110.661
25	88.737	97.667
26	89.359	88.018
27	89.957	84.568
28	90.523	79.995
29	90.973	63.653
30	91.407	61.392
31	91.841	61.358
32	92.260	59.148
33	92.668	57.675
34	93.075	57.686
35	93.462	54.635
36	93.790	46.339
37	94.113	45.797
38	94.436	45.635
39	94.741	43.110
40	95.038	42.044
41	95.336	42.061
42	95.620	40.122
43	95.863	34.408
44	96.093	32.549
45	96.321	32.271
46	96.530	29.563
47	96.734	28.825

48	96.938	28.849
49	97.129	26.966
50	97.304	24.715
51	97.479	24.696
52	97.655	25.000
53	97.843	26.536
54	98.032	26.780
55	98.221	26.725
56	98.343	17.185
57	98.416	10.294
58	98.489	10.293
59	98.561	10.312
60	98.634	10.312
61	98.707	10.274
62	98.780	10.312
63	98.853	10.312
64	98.926	10.274
65	98.999	10.312
66	99.071	10.313
67	99.144	10.273
68	99.217	10.312
69	99.287	9.933
70	99.330	5.989
71	99.364	4.853
72	99.398	4.777
73	99.432	4.890
74	99.466	4.816
75	99.502	4.967
76	99.536	4.815
77	99.570	4.815
78	99.604	4.816
79	99.638	4.816
80	99.672	4.815
81	99.706	4.815
82	99.740	4.816
83	99.774	4.816
84	99.808	4.815
85	99.842	4.815
86	99.876	4.816
87	99.910	4.816
88	99.944	4.815
89	99.978	4.815
90	100.000	3.075

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = .90
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.11

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 175.5245
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 801.0170

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	325.0	650.0	975.0	1300.0
16.083	382.9091	839.81			V. Q	.	
16.167	388.6930	839.81			V. Q	.	
16.250	395.1020	930.59			V. Q	.	
16.333	401.5110	930.59			V Q	.	
16.417	408.5334	1019.66			V	.Q	
16.500	415.5558	1019.66			V	.Q	
16.583	423.5091	1154.81			.V	. Q	
16.667	431.4623	1154.81			.V	. Q	
16.750	439.8935	1224.20			.V	. Q	
16.833	448.3246	1224.20			. V	. Q	
16.917	456.7995	1230.55			. V	. Q	
17.000	465.2744	1230.55			. V	. Q	
17.083	473.9506	1259.79			. V	. Q	
17.167	482.6268	1259.79			. V	. Q	
17.250	490.6990	1172.09			. V	. Q	
17.333	498.7712	1172.09			. V	. Q	
17.417	506.0649	1059.04			. V	. Q	
17.500	513.3585	1059.04			. V	. Q	
17.583	520.0931	977.87			. V	Q	
17.667	526.8278	977.87			. V	Q	
17.750	533.0181	898.84			. VQ	.	
17.833	539.2085	898.84			. VQ	.	
17.917	544.8813	823.70			. Q V	.	
18.000	550.5542	823.70			. Q V	.	
18.083	555.7673	756.94			. Q V	.	
18.167	560.9803	756.94			. Q V	.	
18.250	565.8132	701.74			.Q V	.	
18.333	570.6461	701.74			.Q V	.	
18.417	575.1650	656.15			Q V	.	
18.500	579.6840	656.15			Q V	.	
18.583	583.9646	621.55			Q. V	.	
18.667	588.2452	621.55			Q. V	.	
18.750	592.3026	589.12			Q . V	.	
18.833	596.3599	589.12			Q . V	.	
18.917	600.2377	563.06			Q . V	.	
19.000	604.1155	563.06			Q . V	.	
19.083	607.8360	540.22			Q . V	.	
19.167	611.5565	540.22			Q . V	.	
19.250	615.1412	520.50			Q . V	.	
19.333	618.7260	520.50			Q . V	.	
19.417	622.1845	502.18			Q . V	.	
19.500	625.6431	502.18			Q . V	.	
19.583	628.9708	483.18			Q . V	.	
19.667	632.2985	483.18			Q . V	.	
19.750	635.5200	467.77			Q . V	.	
19.833	638.7416	467.77			Q . V	.	
19.917	641.8523	451.67			Q . V	.	
20.000	644.9630	451.67			Q . V	.	

****
FLOW PROCESS FROM NODE 1.09 TO NODE 1.12 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 35.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3640.00
DOWNSTREAM ELEVATION = 3470.00
CHANNEL LENGTH(FT) = 9700.00 MANNING'S FACTOR = .035
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 1259.79
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 910.48
CHANNEL NORMAL VELOCITY FOR Q = 910.48 CFS = 8.98 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .841

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .638

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	414.0	388.5	388.5
14.167	414.0	395.0	395.0
14.250	437.3	397.5	397.5
14.333	437.3	407.8	407.8
14.417	468.1	411.8	411.8
14.500	468.1	427.6	427.6
14.583	510.8	433.8	433.8
14.667	510.8	455.1	455.1
14.750	559.7	463.4	463.4
14.833	559.7	492.8	492.8
14.917	607.9	504.3	504.3
15.000	607.9	538.8	538.8
15.083	659.8	552.2	552.2
15.167	659.8	586.8	586.8
15.250	707.2	600.3	600.3
15.333	707.2	637.3	637.3
15.417	739.6	651.7	651.7
15.500	739.6	686.2	686.2
15.583	758.8	699.6	699.6
15.667	758.8	724.5	724.5
15.750	770.4	734.1	734.1
15.833	770.4	749.5	749.5
15.917	778.5	755.4	755.4
16.000	778.5	764.8	764.8
16.083	839.8	768.4	768.4
16.167	839.8	774.7	774.7

16.250	930.6	777.1	777.1
16.333	930.6	816.0	816.0
16.417	1019.7	831.2	831.2
16.500	1019.7	893.0	893.0
16.583	1154.8	917.0	917.0
16.667	1154.8	980.9	980.9
16.750	1224.2	1005.6	1005.6
16.833	1224.2	1098.4	1098.4
16.917	1230.6	1134.4	1134.4
17.000	1230.6	1190.4	1190.4
17.083	1259.8	1212.0	1212.0
17.167	1259.8	1223.7	1223.7
17.250	1172.1	1228.1	1228.1
17.333	1172.1	1247.8	1247.8
17.417	1059.0	1255.4	1255.4
17.500	1059.0	1203.8	1203.8
17.583	977.9	1183.6	1183.6
17.667	977.9	1106.2	1106.2
17.750	898.8	1076.1	1076.1
17.833	898.8	1014.9	1014.9
17.917	823.7	991.3	991.3
18.000	823.7	933.7	933.7
18.083	756.9	911.5	911.5
18.167	756.9	856.8	856.8
18.250	701.7	835.7	835.7
18.333	701.7	786.7	786.7
18.417	656.2	767.7	767.7
18.500	656.2	726.6	726.6
18.583	621.5	710.7	710.7
18.667	621.5	676.7	676.7
18.750	589.1	663.6	663.6
18.833	589.1	637.4	637.4
18.917	563.1	627.3	627.3
19.000	563.1	603.5	603.5

==========

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 801.017 AF

OUTFLOW VOLUME = 801.017 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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

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 ************************* DESCRIPTION OF STUDY *************************
*                           DESIGN NODE 1.17                             *
*                 HYDROGRAPH AT NODE 1.12 ROUTED TO NODE 1.13            *
*                                                                        *
 **************************************************************************

  FILE NAME: H112-117.INP
  TIME/DATE OF STUDY:  7:35   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE      1.00 TO NODE      1.12 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    3489.290 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.444 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .500
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .218
        LOW LOSS FRACTION =  .209
        *HYDROGRAPH MODEL #2 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 11.542

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.030	217.320
2	3.336	486.568
3	6.624	693.641
4	11.400	1007.859
5	18.191	1432.759
6	25.802	1605.927
7	33.069	1533.202
8	40.216	1508.104
9	48.472	1741.916
10	54.544	1281.078
11	59.332	1010.360
12	63.245	825.428
13	66.575	702.622
14	69.352	586.079
15	71.704	496.088
16	73.759	433.658
17	75.569	381.981
18	77.236	351.733
19	78.671	302.733
20	80.017	284.003
21	81.204	250.508
22	82.284	227.816
23	83.235	200.646
24	84.148	192.576
25	84.989	177.501
26	85.793	169.524
27	86.532	155.920
28	87.208	142.736
29	87.855	136.510
30	88.449	125.411
31	88.993	114.633
32	89.466	99.890
33	89.931	98.113
34	90.375	93.737
35	90.809	91.572
36	91.160	73.924
37	91.485	68.667
38	91.811	68.682
39	92.136	68.672
40	92.452	66.579
41	92.757	64.503
42	93.063	64.556
43	93.369	64.543
44	93.659	61.130
45	93.906	52.019
46	94.149	51.422
47	94.393	51.385

48	94.635	51.119
49	94.864	48.373
50	95.090	47.510
51	95.315	47.467
52	95.540	47.526
53	95.750	44.252
54	95.934	38.932
55	96.108	36.791
56	96.283	36.755
57	96.453	35.888
58	96.609	33.051
59	96.765	32.895
60	96.921	32.845
61	97.075	32.585
62	97.213	29.038
63	97.346	28.002
64	97.478	28.005
65	97.611	28.037
66	97.750	29.217
67	97.894	30.466
68	98.039	30.466
69	98.183	30.397
70	98.308	26.358
71	98.368	12.852
72	98.426	12.141
73	98.484	12.210
74	98.542	12.210
75	98.599	12.141
76	98.657	12.138
77	98.715	12.282
78	98.772	12.070
79	98.830	12.210
80	98.888	12.210
81	98.946	12.141
82	99.003	12.210
83	99.061	12.139
84	99.119	12.212
85	99.176	12.139
86	99.234	12.210
87	99.290	11.713
88	99.323	7.068
89	99.351	5.784
90	99.378	5.713
91	99.404	5.641
92	99.432	5.855
93	99.459	5.642
94	99.486	5.784
95	99.515	6.141
96	99.543	5.784
97	99.570	5.785
98	99.598	5.785
99	99.625	5.784
100	99.653	5.784
101	99.680	5.785
102	99.707	5.785
103	99.735	5.784
104	99.762	5.784
105	99.790	5.785
106	99.817	5.785
107	99.844	5.784
108	99.872	5.784
109	99.899	5.785

110	99.927	5.785
111	99.954	5.784
112	99.982	5.784
113	100.000	3.902

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.01
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.01

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 292.3543
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1164.8510

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	425.0	850.0	1275.0	1700.0
16.083	524.8417	1158.63	.	.	V .	Q .	.
16.167	532.8212	1158.63	.	.	V .	Q .	.
16.250	541.3940	1244.77	.	.	V .	Q.	.
16.333	549.9669	1244.77	.	.	V .	Q.	.
16.417	559.1151	1328.32	.	.	V.	.Q	.
16.500	568.2632	1328.32	.	.	V.	.Q	.
16.583	578.2566	1451.03	.	.	V.	. Q	.
16.667	588.2499	1451.03	.	.	V	. Q	.
16.750	599.0980	1575.13	.	.	V	.	Q .
16.833	609.9460	1575.13	.	.	V	.	Q .
16.917	621.1859	1632.03	.	.	.V	.	Q .
17.000	632.4257	1632.03	.	.	.V	.	Q .
17.083	643.6537	1630.31	.	.	. V	.	Q .
17.167	654.8818	1630.31	.	.	. V	.	Q .
17.250	666.2206	1646.41	.	.	. V	.	Q .
17.333	677.5595	1646.41	.	.	. V	.	Q .
17.417	689.1404	1681.54	.	.	. V	.	Q.
17.500	700.7213	1681.54	.	.	. V	.	Q.
17.583	711.1615	1515.92	.	.	. V	. Q	.
17.667	721.6017	1515.92	.	.	. V	. Q	.
17.750	731.2912	1406.90	.	.	. V	. Q	.
17.833	740.9807	1406.90	.	.	. V	. Q	.
17.917	749.9742	1305.87	.	.	. V	Q	.
18.000	758.9678	1305.87	.	.	. V	Q	.
18.083	767.3557	1217.92	.	.	. V	Q .	.
18.167	775.7435	1217.92	.	.	. V	Q .	.
18.250	783.5284	1130.37	.	.	. Q	.	.
18.333	791.3134	1130.37	.	.	. QV	.	.
18.417	798.5144	1045.59	.	.	. Q	V .	.
18.500	805.7154	1045.59	.	.	. Q	V .	.
18.583	812.4625	979.68	.	.	. Q	V .	.
18.667	819.2097	979.68	.	.	. Q	V .	.
18.750	825.5853	925.74	.	.	.Q	V .	.
18.833	831.9609	925.74	.	.	.Q	V .	.
18.917	838.0370	882.26	.	.	Q	V .	.
19.000	844.1132	882.26	.	.	Q	V .	.
19.083	849.8888	838.61	.	.	Q.	V.	.
19.167	855.6644	838.61	.	.	Q.	V.	.
19.250	861.2159	806.09	.	.	Q .	V.	.
19.333	866.7675	806.09	.	.	Q .	V.	.
19.417	872.0919	773.10	.	.	Q .	V.	.
19.500	877.4163	773.10	.	.	Q .	V	.
19.583	882.5427	744.34	.	.	Q .	V	.
19.667	887.6690	744.34	.	.	Q .	V	.
19.750	892.6038	716.54	.	.	Q .	V	.
19.833	897.5386	716.54	.	.	Q .	V	.
19.917	902.3220	694.55	.	.	Q .	V	.
20.000	907.1054	694.55	.	.	Q .	V	.

****

FLOW PROCESS FROM NODE 1.12 TO NODE 1.13 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 50.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3470.00
DOWNSTREAM ELEVATION = 3375.00
CHANNEL LENGTH(FT) = 7000.00 MANNING'S FACTOR = .040
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 1681.54
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 1234.33
CHANNEL NORMAL VELOCITY FOR Q = 1234.33 CFS = 7.69 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .819

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .642

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	574.8	548.1	548.1
14.167	574.8	553.5	553.5
14.250	601.2	561.5	561.5
14.333	601.2	570.0	570.0
14.417	634.1	581.8	581.8
14.500	634.1	594.2	594.2
14.583	676.3	609.6	609.6
14.667	676.3	625.4	625.4
14.750	730.5	645.0	645.0
14.833	730.5	665.1	665.1
14.917	790.4	690.3	690.3
15.000	790.4	716.1	716.1
15.083	850.1	745.2	745.2
15.167	850.1	774.3	774.3
15.250	911.1	804.4	804.4
15.333	911.1	833.8	833.8
15.417	971.1	864.5	864.5
15.500	971.1	894.4	894.4
15.583	1011.9	925.0	925.0
15.667	1011.9	954.6	954.6
15.750	1044.1	978.7	978.7
15.833	1044.1	1000.1	1000.1
15.917	1077.1	1018.3	1018.3
16.000	1077.1	1034.9	1034.9
16.083	1158.6	1051.7	1051.7
16.167	1158.6	1068.0	1068.0

16.250	1244.8	1100.8	1100.8
16.333	1244.8	1138.0	1138.0
16.417	1328.3	1179.8	1179.8
16.500	1328.3	1221.5	1221.5
16.583	1451.0	1264.1	1264.1
16.667	1451.0	1305.4	1305.4
16.750	1575.1	1360.8	1360.8
16.833	1575.1	1418.8	1418.8
16.917	1632.0	1480.6	1480.6
17.000	1632.0	1541.3	1541.3
17.083	1630.3	1581.9	1581.9
17.167	1630.3	1614.1	1614.1
17.250	1646.4	1625.1	1625.1
17.333	1646.4	1628.4	1628.4
17.417	1681.5	1635.0	1635.0
17.500	1681.5	1642.3	1642.3
17.583	1515.9	1656.6	1656.6
17.667	1515.9	1672.6	1672.6
17.750	1406.9	1623.5	1623.5
17.833	1406.9	1554.4	1554.4
17.917	1305.9	1493.6	1493.6
18.000	1305.9	1437.9	1437.9
18.083	1217.9	1384.5	1384.5
18.167	1217.9	1334.0	1334.0
18.250	1130.4	1286.8	1286.8
18.333	1130.4	1242.5	1242.5
18.417	1045.6	1197.7	1197.7
18.500	1045.6	1154.5	1154.5
18.583	979.7	1110.9	1110.9
18.667	979.7	1068.9	1068.9
18.750	925.7	1032.1	1032.1
18.833	925.7	998.4	998.4
18.917	882.3	968.5	968.5
19.000	882.3	941.0	941.0

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 1164.852 AF

OUTFLOW VOLUME = 1164.852 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.17                              *
*                  HYDROGRAPH AT NODE 1.13 ROUTED TO NODE 1.14           *
*                                                                        *
 **************************************************************************

  FILE NAME: H113-117.INP
  TIME/DATE OF STUDY:  7:41   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.13 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

       WATERSHED AREA =    3715.180 ACRES
       BASEFLOW =     .000 CFS/SQUARE-MILE
       *USER ENTERED "LAG" TIME =    1.697 HOURS
       VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
       FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
       MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .300
       VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .050
       MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .225
       LOW LOSS FRACTION =  .218
       *HYDROGRAPH MODEL #3 SPECIFIED*

       SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
       SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
       SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
       SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
       SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
       SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

       *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
         5-MINUTE FACTOR =  .506
        30-MINUTE FACTOR =  .534
         1-HOUR FACTOR =  .551
         3-HOUR FACTOR =  .879
         6-HOUR FACTOR =  .946
        24-HOUR FACTOR =  .966

       UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 14.732

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.134	169.785
2	3.955	422.564
3	8.403	666.127
4	15.470	1058.463
5	24.051	1285.128
6	33.241	1376.406
7	45.667	1860.984
8	55.953	1540.573
9	62.899	1040.211
10	68.336	814.339
11	72.581	635.724
12	75.966	506.930
13	78.725	413.253
14	81.114	357.861
15	83.052	290.202
16	84.752	254.649
17	86.170	212.280
18	87.362	178.594
19	88.443	161.848
20	89.421	146.556
21	90.337	137.112
22	91.138	119.984
23	91.872	109.901
24	92.509	95.487
25	93.034	78.641
26	93.522	72.995
27	93.956	65.085
28	94.331	56.045
29	94.612	42.186
30	94.892	41.910
31	95.170	41.584
32	95.431	39.113
33	95.689	38.594
34	95.946	38.606
35	96.168	33.193
36	96.371	30.445
37	96.575	30.455
38	96.775	30.073
39	96.968	28.776
40	97.159	28.701
41	97.350	28.559
42	97.526	26.436
43	97.697	25.581
44	97.837	20.951
45	97.958	18.065
46	98.071	17.000
47	98.185	16.996

48	98.296	16.672
49	98.394	14.699
50	98.490	14.339
51	98.586	14.338
52	98.687	15.125
53	98.791	15.660
54	98.896	15.671
55	98.986	13.521
56	99.033	6.993
57	99.077	6.624
58	99.121	6.601
59	99.166	6.647
60	99.210	6.601
61	99.254	6.600
62	99.298	6.648
63	99.342	6.624
64	99.386	6.600
65	99.431	6.624
66	99.475	6.624
67	99.519	6.624
68	99.563	6.577
69	99.593	4.479
70	99.614	3.122
71	99.635	3.145
72	99.655	3.098
73	99.676	3.122
74	99.697	3.121
75	99.721	3.527
76	99.741	3.121
77	99.762	3.122
78	99.783	3.122
79	99.804	3.122
80	99.825	3.122
81	99.846	3.121
82	99.867	3.122
83	99.887	3.122
84	99.908	3.122
85	99.929	3.122
86	99.950	3.121
87	99.971	3.122
88	99.992	3.122
89	100.000	1.263

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.06
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.95

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 328.1538
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1223.3980

---

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

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	450.0	900.0	1350.0	1800.0
16.083	536.3792	1181.18	.	.	V .	Q .	.
16.167	544.5141	1181.18	.	.	V .	Q .	.
16.250	552.6490	1181.18	.	.	V .	Q .	.
16.333	561.5443	1291.59	.	.	V .	Q .	.
16.417	570.4395	1291.59	.	.	V .	Q .	.
16.500	579.3348	1291.59	.	.	V .	Q .	.
16.583	589.0070	1404.41	.	.	V.	.Q	.
16.667	598.6793	1404.41	.	.	V.	.Q	.
16.750	608.3515	1404.41	.	.	V.	.Q	.
16.833	618.8515	1524.60	.	.	V	. Q	.
16.917	629.3515	1524.60	.	.	V	. Q	.
17.000	639.8515	1524.60	.	.	V	. Q	.
17.083	650.8062	1590.63	.	.	.V	. Q	.
17.167	661.7609	1590.63	.	.	.V	. Q	.
17.250	672.7156	1590.63	.	.	.V	. Q	.
17.333	684.1061	1653.90	.	.	. V	. Q	.
17.417	695.4966	1653.90	.	.	. V	. Q	.
17.500	706.8871	1653.90	.	.	. V	. Q	.
17.583	719.0106	1760.32	.	.	. V	.	Q.
17.667	731.1340	1760.32	.	.	. V	.	Q.
17.750	743.2574	1760.32	.	.	. V	.	Q.
17.833	754.4197	1620.77	.	.	. V	. Q	.
17.917	765.5821	1620.77	.	.	. V	. Q	.
18.000	776.7444	1620.77	.	.	. V	. Q	.
18.083	786.6248	1434.62	.	.	. V	.Q	.
18.167	796.5051	1434.62	.	.	. V	.Q	.
18.250	806.3854	1434.62	.	.	. V	.Q	.
18.333	815.3738	1305.12	.	.	. V	Q.	.
18.417	824.3623	1305.12	.	.	. V	Q.	.
18.500	833.3508	1305.12	.	.	. V	Q.	.
18.583	841.3566	1162.44	.	.	. Q	V .	.
18.667	849.3624	1162.44	.	.	. Q	V .	.
18.750	857.3682	1162.44	.	.	. Q	V .	.
18.833	864.5651	1045.00	.	.	. Q	V .	.
18.917	871.7621	1045.00	.	.	. Q	V .	.
19.000	878.9590	1045.00	.	.	. Q	V .	.
19.083	885.5540	957.59	.	.	.Q	V .	.
19.167	892.1490	957.59	.	.	.Q	V.	.
19.250	898.7440	957.59	.	.	.Q	V.	.
19.333	904.8655	888.85	.	.	Q.	V.	.
19.417	910.9871	888.85	.	.	Q.	V.	.
19.500	917.1087	888.85	.	.	Q.	V.	.
19.583	922.8187	829.08	.	.	Q .	V	.
19.667	928.5286	829.08	.	.	Q .	V	.
19.750	934.2386	829.08	.	.	Q .	V	.
19.833	939.6245	782.03	.	.	Q .	V	.
19.917	945.0103	782.03	.	.	Q .	V	.
20.000	950.3962	782.03	.	.	Q .	V	.

```
****************************************************************************
  FLOW PROCESS FROM NODE     1.13 TO NODE     1.14 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
============================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   50.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3375.00
          DOWNSTREAM ELEVATION =    3285.00
          CHANNEL LENGTH(FT) =    4200.00     MANNING'S FACTOR =  .035
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1760.32
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1282.31
          CHANNEL NORMAL VELOCITY FOR Q =  1282.31 CFS =   9.89 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .853

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .817


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
         MODEL        INFLOW     ROUTED      LOSS
          TIME      (STREAM 1)    FLOW     (STREAM 1)
         (HRS)       (CFS)       (CFS)       (CFS)
         14.083        596.1       572.6       572.6
         14.167        596.1       587.8       587.8
         14.250        596.1       594.6       594.6
         14.333        632.1       595.8       595.8
         14.417        632.1       619.3       619.3
         14.500        632.1       629.7       629.7
         14.583        680.5       631.6       631.6
         14.667        680.5       663.3       663.3
         14.750        680.5       677.3       677.3
         14.833        746.9       679.9       679.9
         14.917        746.9       723.3       723.3
         15.000        746.9       742.6       742.6
         15.083        825.5       746.1       746.1
         15.167        825.5       797.6       797.6
         15.250        825.5       820.4       820.4
         15.333        904.8       824.6       824.6
         15.417        904.8       876.6       876.6
         15.500        904.8       899.6       899.6
         15.583        995.3       903.8       903.8
         15.667        995.3       963.2       963.2
         15.750        995.3       989.4       989.4
         15.833       1078.1       994.2       994.2
         15.917       1078.1      1048.7      1048.7
         16.000       1078.1      1072.8      1072.8
         16.083       1181.2      1077.2      1077.2
         16.167       1181.2      1144.6      1144.6
```

16.250	1181.2	1174.5	1174.5
16.333	1291.6	1180.0	1180.0
16.417	1291.6	1252.4	1252.4
16.500	1291.6	1284.4	1284.4
16.583	1404.4	1290.3	1290.3
16.667	1404.4	1364.4	1364.4
16.750	1404.4	1397.1	1397.1
16.833	1524.6	1403.1	1403.1
16.917	1524.6	1481.9	1481.9
17.000	1524.6	1516.8	1516.8
17.083	1590.6	1523.2	1523.2
17.167	1590.6	1567.1	1567.1
17.250	1590.6	1586.3	1586.3
17.333	1653.9	1589.8	1589.8
17.417	1653.9	1631.4	1631.4
17.500	1653.9	1649.8	1649.8
17.583	1760.3	1653.2	1653.2
17.667	1760.3	1722.6	1722.6
17.750	1760.3	1753.4	1753.4
17.833	1620.8	1759.1	1759.1
17.917	1620.8	1669.8	1669.8
18.000	1620.8	1629.7	1629.7
18.083	1434.6	1622.4	1622.4
18.167	1434.6	1500.6	1500.6
18.250	1434.6	1446.7	1446.7
18.333	1305.1	1436.8	1436.8
18.417	1305.1	1351.2	1351.2
18.500	1305.1	1313.6	1313.6
18.583	1162.4	1306.7	1306.7
18.667	1162.4	1213.1	1213.1
18.750	1162.4	1171.7	1171.7
18.833	1045.0	1164.1	1164.1
18.917	1045.0	1086.8	1086.8
19.000	1045.0	1052.6	1052.6

==========

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 1223.399 AF

OUTFLOW VOLUME = 1223.398 AF

LOSS VOLUME = .000 AF

==========

END OF FLOOD ROUTING ANALYSIS

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

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

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 *************************** DESCRIPTION OF STUDY ***************************
*                          DESIGN NODE 1.17                                  *
*                 HYDROGRAPH AT NODE 1.14 ROUTED TO NODE 1.16                *
*                                                                            *
 ****************************************************************************

  FILE NAME: H114-117.INP
  TIME/DATE OF STUDY:  7:46   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.14 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =   11095.670 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.815 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .195
        LOW LOSS FRACTION =  .207
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 13.774

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.048	468.829
2	3.557	1122.271
3	7.404	1720.552
4	13.317	2644.934
5	20.867	3377.281
6	29.295	3769.536
7	39.641	4627.866
8	51.808	5442.356
9	59.447	3416.783
10	65.285	2611.388
11	69.923	2074.312
12	73.580	1635.594
13	76.590	1346.561
14	79.068	1108.523
15	81.276	987.544
16	83.085	809.240
17	84.708	725.676
18	86.087	617.118
19	87.287	536.537
20	88.354	477.540
21	89.338	439.711
22	90.245	405.906
23	91.049	359.543
24	91.797	334.454
25	92.463	298.035
26	93.054	264.584
27	93.549	221.033
28	94.014	208.007
29	94.434	188.006
30	94.784	156.685
31	95.054	120.778
32	95.324	120.768
33	95.593	120.164
34	95.846	113.192
35	96.094	110.827
36	96.342	110.977
37	96.573	103.589
38	96.774	89.594
39	96.972	88.720
40	97.170	88.693
41	97.359	84.506
42	97.541	81.363
43	97.723	81.284
44	97.903	80.377
45	98.064	72.023
46	98.174	49.322
47	98.284	49.291

48	98.389	46.807
49	98.483	42.091
50	98.576	41.886
51	98.670	41.784
52	98.756	38.610
53	98.839	36.992
54	98.921	36.914
55	99.005	37.344
56	99.092	39.146
57	99.181	39.422
58	99.269	39.429
59	99.331	28.086
60	99.359	12.381
61	99.387	12.330
62	99.414	12.330
63	99.442	12.278
64	99.469	12.330
65	99.497	12.330
66	99.524	12.330
67	99.552	12.330
68	99.580	12.330
69	99.607	12.333
70	99.635	12.278
71	99.662	12.381
72	99.690	12.278
73	99.716	11.770
74	99.732	7.003
75	99.745	5.836
76	99.758	5.733
77	99.770	5.784
78	99.783	5.784
79	99.796	5.836
80	99.811	6.443
81	99.824	5.836
82	99.837	5.836
83	99.850	5.836
84	99.863	5.836
85	99.876	5.832
86	99.889	5.836
87	99.902	5.836
88	99.915	5.836
89	99.928	5.836
90	99.941	5.832
91	99.954	5.836
92	99.967	5.836
93	99.980	5.836
94	99.993	5.836
95	100.000	2.921

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.00
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.01

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 926.2938
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 3707.5070

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 1300.0 2600.0 3900.0 5200.0
16.083	1593.5080	3481.12	. . V . Q . .
16.167	1617.4820	3481.12	. . V . Q . .
16.250	1641.4570	3481.12	. . V . Q . .
16.333	1667.6400	3801.86	. . V . Q. .
16.417	1693.8240	3801.86	. . V . Q. .
16.500	1720.0080	3801.86	. . V . Q. .
16.583	1748.2970	4107.56	. . V . .Q .
16.667	1776.5860	4107.56	. . V. .Q .
16.750	1804.8750	4107.56	. . V. .Q .
16.833	1835.5070	4447.83	. . V. . Q .
16.917	1866.1400	4447.83	. . V . Q .
17.000	1896.7720	4447.83	. . V . Q .
17.083	1928.7600	4644.68	. . V . Q .
17.167	1960.7480	4644.68	. . V . Q .
17.250	1992.7370	4644.68	. . V . Q .
17.333	2025.8980	4815.05	. . .V . Q .
17.417	2059.0600	4815.05	. . . V . Q .
17.500	2092.2210	4815.05	. . . V . Q .
17.583	2127.4140	5109.97	. . . V . Q.
17.667	2162.6060	5109.97	. . . V . Q.
17.750	2197.7990	5109.97	. . . V . Q.
17.833	2233.3180	5157.35	. . . V . Q.
17.917	2268.8370	5157.35	. . . V . Q.
18.000	2304.3560	5157.35	. . . V . Q.
18.083	2335.1300	4468.37	. . . V . Q .
18.167	2365.9040	4468.37	. . . V . Q .
18.250	2396.6780	4468.37	. . . V . Q .
18.333	2424.7680	4078.73	. . . V .Q .
18.417	2452.8580	4078.73	. . . V .Q .
18.500	2480.9490	4078.73	. . . V .Q .
18.583	2506.3560	3689.13	. . . VQ . .
18.667	2531.7630	3689.13	. . . VQ . .
18.750	2557.1700	3689.13	. . . VQ . .
18.833	2579.8250	3289.40	. . . Q V . .
18.917	2602.4790	3289.40	. . . Q V . .
19.000	2625.1330	3289.40	. . . Q V . .
19.083	2645.8460	3007.54	. . . Q V . .
19.167	2666.5600	3007.54	. . . Q V . .
19.250	2687.2730	3007.54	. . . Q V . .
19.333	2706.4080	2778.49	. . .Q V. .
19.417	2725.5440	2778.49	. . .Q V. .
19.500	2744.6790	2778.49	. . .Q V. .
19.583	2762.6150	2604.33	. . Q V. .
19.667	2780.5510	2604.33	. . Q V. .
19.750	2798.4870	2604.33	. . Q V .
19.833	2815.3280	2445.27	. . Q . V .
19.917	2832.1680	2445.27	. . Q . V .
20.000	2849.0090	2445.27	. . Q . V .

****
FLOW PROCESS FROM NODE 1.14 TO NODE 1.16 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 100.00 CHANNEL Z = 2.00
UPSTREAM ELEVATION = 3285.00
DOWNSTREAM ELEVATION = 3145.00
CHANNEL LENGTH(FT) = 9600.00 MANNING'S FACTOR = .030
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 5157.35
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 3785.82
CHANNEL NORMAL VELOCITY FOR Q = 3785.82 CFS = 11.91 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .875

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .723

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	1783.3	1712.6	1712.6
14.167	1783.3	1716.2	1716.2
14.250	1783.3	1748.1	1748.1
14.333	1883.8	1773.6	1773.6
14.417	1883.8	1780.6	1780.6
14.500	1883.8	1829.7	1829.7
14.583	2016.1	1868.8	1868.8
14.667	2016.1	1879.6	1879.6
14.750	2016.1	1944.7	1944.7
14.833	2193.4	1996.4	1996.4
14.917	2193.4	2010.7	2010.7
15.000	2193.4	2097.8	2097.8
15.083	2409.2	2166.9	2166.9
15.167	2409.2	2186.1	2186.1
15.250	2409.2	2292.7	2292.7
15.333	2633.1	2376.9	2376.9
15.417	2633.1	2400.3	2400.3
15.500	2633.1	2511.8	2511.8
15.583	2872.0	2599.5	2599.5
15.667	2872.0	2623.8	2623.8
15.750	2872.0	2742.6	2742.6
15.833	3158.3	2836.2	2836.2
15.917	3158.3	2862.1	2862.1
16.000	3158.3	3003.6	3003.6
16.083	3481.1	3115.4	3115.4
16.167	3481.1	3146.4	3146.4

16.250	3481.1	3306.5	3306.5
16.333	3801.9	3432.7	3432.7
16.417	3801.9	3467.7	3467.7
16.500	3801.9	3627.9	3627.9
16.583	4107.6	3753.7	3753.7
16.667	4107.6	3788.5	3788.5
16.750	4107.6	3941.6	3941.6
16.833	4447.8	4061.6	4061.6
16.917	4447.8	4094.8	4094.8
17.000	4447.8	4263.7	4263.7
17.083	4644.7	4396.8	4396.8
17.167	4644.7	4433.7	4433.7
17.250	4644.7	4536.3	4536.3
17.333	4815.0	4614.6	4614.6
17.417	4815.0	4636.4	4636.4
17.500	4815.0	4722.3	4722.3
17.583	5110.0	4789.4	4789.4
17.667	5110.0	4807.9	4807.9
17.750	5110.0	4951.5	4951.5
17.833	5157.4	5066.0	5066.0
17.917	5157.4	5097.8	5097.8
18.000	5157.4	5128.8	5128.8
18.083	4468.4	5149.4	5149.4
18.167	4468.4	5155.2	5155.2
18.250	4468.4	4833.4	4833.4
18.333	4078.7	4569.5	4569.5
18.417	4078.7	4496.4	4496.4
18.500	4078.7	4293.3	4293.3
18.583	3689.1	4138.2	4138.2
18.667	3689.1	4095.2	4095.2
18.750	3689.1	3900.5	3900.5
18.833	3289.4	3747.7	3747.7
18.917	3289.4	3705.4	3705.4
19.000	3289.4	3506.0	3506.0

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 3707.505 AF

OUTFLOW VOLUME = 3707.508 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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          F L O O D   R O U T I N G   A N A L Y S I S
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 ************************* DESCRIPTION OF STUDY *************************
*                         DESIGN NODE 1.17                               *
*               HYDROGRAPH AT NODE 1.16 ROUTED TO NODE 1.17              *
*                                                                        *
 **************************************************************************

  FILE NAME: H116-117.INP
  TIME/DATE OF STUDY:  7:52   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.16 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =   14167.440 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    2.039 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .222
        LOW LOSS FRACTION =  .244
        *HYDROGRAPH MODEL #4 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 16.348

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.247	534.349
2	4.508	1396.813
3	9.951	2331.444
4	18.107	3493.486
5	27.928	4206.506
6	40.097	5212.903
7	53.645	5802.913
8	61.935	3550.911
9	68.116	2647.888
10	72.821	2015.394
11	76.476	1565.210
12	79.413	1258.051
13	81.915	1071.722
14	83.953	873.361
15	85.703	749.602
16	87.168	627.287
17	88.440	544.949
18	89.583	489.684
19	90.626	446.726
20	91.535	389.183
21	92.353	350.477
22	93.061	303.251
23	93.647	251.140
24	94.179	227.672
25	94.651	202.182
26	94.991	145.531
27	95.311	137.243
28	95.628	135.982
29	95.926	127.612
30	96.221	126.057
31	96.508	123.148
32	96.737	98.194
33	96.958	94.347
34	97.177	93.811
35	97.381	87.654
36	97.582	85.955
37	97.781	85.439
38	97.962	77.501
39	98.137	74.690
40	98.311	74.491
41	98.442	56.357
42	98.553	47.634
43	98.664	47.510
44	98.767	43.889
45	98.865	42.023
46	98.963	42.027
47	99.065	43.723

48	99.170	44.827
49	99.274	44.772
50	99.338	27.487
51	99.371	14.003
52	99.404	14.020
53	99.437	14.003
54	99.469	14.000
55	99.502	14.003
56	99.535	14.000
57	99.567	14.003
58	99.600	14.000
59	99.633	14.003
60	99.665	14.043
61	99.698	13.958
62	99.725	11.464
63	99.741	6.716
64	99.756	6.592
65	99.771	6.549
66	99.787	6.634
67	99.803	6.794
68	99.818	6.634
69	99.834	6.631
70	99.849	6.634
71	99.864	6.634
72	99.880	6.631
73	99.895	6.634
74	99.911	6.631
75	99.926	6.634
76	99.942	6.634
77	99.957	6.631
78	99.973	6.634
79	99.988	6.631
80	100.000	4.987

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.19
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.82

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1406.2960
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 4510.4600

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24 - HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	1475.0	2950.0	4425.0	5900.0
16.083	1865.9230	4032.47	.	.	V .	Q .	.
16.167	1893.6940	4032.47	.	.	V .	Q .	.
16.250	1921.4660	4032.47	.	.	V .	Q .	.
16.333	1949.2380	4032.47	.	.	V .	Q .	.
16.417	1980.2780	4506.93	.	.	V .	Q	.
16.500	2011.3170	4506.93	.	.	V .	Q	.
16.583	2042.3560	4506.93	.	.	V .	Q	.
16.667	2073.3960	4506.93	.	.	V .	Q	.
16.750	2107.6050	4967.14	.	.	V .	. Q	.
16.833	2141.8140	4967.14	.	.	V .	. Q	.
16.917	2176.0230	4967.14	.	.	V.	. Q	.
17.000	2210.2320	4967.14	.	.	V.	. Q	.
17.083	2247.0530	5346.49	.	.	V.	. Q	.
17.167	2283.8750	5346.49	.	.	V	. Q	.
17.250	2320.6970	5346.49	.	.	V	. Q	.
17.333	2357.5180	5346.49	.	.	V	. Q	.
17.417	2395.5950	5528.83	.	.	.V	. Q	.
17.500	2433.6730	5528.83	.	.	.V	. Q	.
17.583	2471.7500	5528.83	.	.	.V	. Q	.
17.667	2509.8280	5528.83	.	.	. V	. Q	.
17.750	2549.9360	5823.79	.	.	. V	.	Q.
17.833	2590.0450	5823.79	.	.	. V	.	Q.
17.917	2630.1540	5823.79	.	.	. V	.	Q.
18.000	2670.2620	5823.79	.	.	. V	.	Q.
18.083	2709.8730	5751.42	.	.	. V	.	Q .
18.167	2749.4830	5751.42	.	.	. V	.	Q .
18.250	2789.0930	5751.42	.	.	. V	.	Q .
18.333	2828.7040	5751.42	.	.	. V	.	Q .
18.417	2862.9830	4977.41	.	.	. V	. Q	.
18.500	2897.2630	4977.41	.	.	. V	. Q	.
18.583	2931.5430	4977.41	.	.	. V	. Q	.
18.667	2965.8230	4977.41	.	.	. V	. Q	.
18.750	2996.1340	4401.17	.	.	. V	Q.	.
18.833	3026.4450	4401.17	.	.	. V	Q.	.
18.917	3056.7560	4401.17	.	.	. V	Q.	.
19.000	3087.0670	4401.17	.	.	. V	Q.	.
19.083	3113.5990	3852.51	.	.	. QV	.	.
19.167	3140.1320	3852.51	.	.	. QV	.	.
19.250	3166.6640	3852.51	.	.	. Q	V .	.
19.333	3193.1970	3852.51	.	.	. Q	V .	.
19.417	3217.0140	3458.31	.	.	. Q	V .	.
19.500	3240.8320	3458.31	.	.	. Q	V .	.
19.583	3264.6500	3458.31	.	.	. Q	V .	.
19.667	3288.4670	3458.31	.	.	. Q	V.	.
19.750	3310.2460	3162.27	.	.	.Q	V.	.
19.833	3332.0250	3162.27	.	.	.Q	V.	.
19.917	3353.8040	3162.27	.	.	.Q	V.	.
20.000	3375.5830	3162.27	.	.	.Q	V.	.

```
**************************************************************************
 FLOW PROCESS FROM NODE     1.16 TO NODE     1.17 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

      THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
      TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
      INTERVALS(Reference: the National Engineering Handbook,
      Hydrology, Chapter 17, page 17-52, August,1972,
      U.S. Department of Commerce).


      ASSUMED REGULAR CHANNEL INFORMATION:
        BASEWIDTH(FT) =  100.00     CHANNEL Z =  2.00
        UPSTREAM ELEVATION =    3145.00
        DOWNSTREAM ELEVATION =    3070.00
        CHANNEL LENGTH(FT) =    6900.00     MANNING'S FACTOR =  .030
        CONSTANT LOSS RATE(CFS) =     .00


      CHANNEL ROUTING COEFFICIENT ESTIMATED:
        MAXIMUM INFLOW(CFS) =  5823.79
        AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  4358.34
        CHANNEL NORMAL VELOCITY FOR Q =  4358.34 CFS =  11.42 FPS
        ESTIMATED CHANNEL ROUTING COEFFICIENT =  .870

      MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
      UNIT INTERVALS IS CSTAR =  .767


      CONVEX METHOD CHANNEL ROUTING RESULTS:
                                        OUTFLOW LESS
       MODEL        INFLOW     ROUTED      LOSS
        TIME      (STREAM 1)    FLOW     (STREAM 1)
       (HRS)       (CFS)       (CFS)       (CFS)
       14.083       2133.2      2043.4      2043.4
       14.167       2133.2      2060.7      2060.7
       14.250       2133.2      2116.3      2116.3
       14.333       2133.2      2129.2      2129.2
       14.417       2288.7      2132.3      2132.3
       14.500       2288.7      2162.4      2162.4
       14.583       2288.7      2259.3      2259.3
       14.667       2288.7      2281.8      2281.8
       14.750       2509.3      2287.1      2287.1
       14.833       2509.3      2330.1      2330.1
       14.917       2509.3      2467.6      2467.6
       15.000       2509.3      2499.6      2499.6
       15.083       2808.2      2507.0      2507.0
       15.167       2808.2      2565.4      2565.4
       15.250       2808.2      2751.7      2751.7
       15.333       2808.2      2795.1      2795.1
       15.417       3127.8      2805.2      2805.2
       15.500       3127.8      2868.0      2868.0
       15.583       3127.8      3067.4      3067.4
       15.667       3127.8      3113.7      3113.7
       15.750       3502.6      3124.5      3124.5
       15.833       3502.6      3198.0      3198.0
       15.917       3502.6      3431.8      3431.8
       16.000       3502.6      3486.2      3486.2
       16.083       4032.5      3498.8      3498.8
       16.167       4032.5      3602.1      3602.1
```

16.250	4032.5	3932.3	3932.3
16.333	4032.5	4009.2	4009.2
16.417	4506.9	4027.0	4027.0
16.500	4506.9	4121.1	4121.1
16.583	4506.9	4417.1	4417.1
16.667	4506.9	4486.0	4486.0
16.750	4967.1	4502.1	4502.1
16.833	4967.1	4592.9	4592.9
16.917	4967.1	4880.1	4880.1
17.000	4967.1	4946.9	4946.9
17.083	5346.5	4962.4	4962.4
17.167	5346.5	5037.9	5037.9
17.250	5346.5	5274.7	5274.7
17.333	5346.5	5329.8	5329.8
17.417	5528.8	5342.6	5342.6
17.500	5528.8	5380.1	5380.1
17.583	5528.8	5494.2	5494.2
17.667	5528.8	5520.8	5520.8
17.750	5823.8	5527.0	5527.0
17.833	5823.8	5584.2	5584.2
17.917	5823.8	5768.1	5768.1
18.000	5823.8	5810.8	5810.8
18.083	5751.4	5820.8	5820.8
18.167	5751.4	5809.4	5809.4
18.250	5751.4	5764.9	5764.9
18.333	5751.4	5754.6	5754.6
18.417	4977.4	5752.1	5752.1
18.500	4977.4	5605.0	5605.0
18.583	4977.4	5123.4	5123.4
18.667	4977.4	5011.4	5011.4
18.750	4401.2	4985.3	4985.3
18.833	4401.2	4870.1	4870.1
18.917	4401.2	4510.3	4510.3
19.000	4401.2	4426.6	4426.6

==========

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 4510.457 AF

OUTFLOW VOLUME = 4510.457 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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                      Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                         DESIGN NODE 1.17                               *
*                   HYDROGRAPH AT NODE 2.07 ROUTED TO NODE 2.09          *
*                                                                        *
 **************************************************************************

  FILE NAME: H207-117.INP
  TIME/DATE OF STUDY:  8: 2   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.07 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =     790.000 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =     .827 HOURS
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .700
        VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .304
        LOW LOSS FRACTION =  .319
        *HYDROGRAPH MODEL #1 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 10.077

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.003	95.791
2	3.144	204.612
3	6.146	286.785
4	9.908	359.461
5	15.572	541.150
6	22.422	654.413
7	29.534	679.449
8	35.800	598.657
9	41.437	538.576
10	47.501	579.415
11	52.196	448.497
12	55.741	338.729
13	58.744	286.898
14	61.258	240.239
15	63.596	223.308
16	65.574	188.981
17	67.361	170.716
18	69.050	161.445
19	70.530	141.404
20	71.989	139.354
21	73.312	126.402
22	74.557	118.987
23	75.763	115.144
24	76.838	102.776
25	77.902	101.572
26	78.855	91.104
27	79.754	85.875
28	80.626	83.351
29	81.425	76.294
30	82.216	75.545
31	82.921	67.353
32	83.587	63.716
33	84.232	61.594
34	84.821	56.282
35	85.404	55.702
36	85.923	49.578
37	86.417	47.153
38	86.905	46.652
39	87.381	45.478
40	87.852	44.952
41	88.242	37.262
42	88.604	34.651
43	88.967	34.667
44	89.330	34.651
45	89.691	34.554
46	90.038	33.137
47	90.381	32.747

48	90.724	32.731
49	91.066	32.728
50	91.403	32.211
51	91.686	27.035
52	91.955	25.700
53	92.224	25.711
54	92.494	25.751
55	92.761	25.552
56	93.014	24.113
57	93.263	23.825
58	93.512	23.786
59	93.761	23.799
60	94.007	23.465
61	94.227	20.998
62	94.442	20.537
63	94.656	20.526
64	94.871	20.510
65	95.082	20.128
66	95.269	17.850
67	95.453	17.622
68	95.637	17.595
69	95.822	17.623
70	96.002	17.227
71	96.161	15.205
72	96.318	14.947
73	96.473	14.894
74	96.630	14.920
75	96.788	15.153
76	96.957	16.113
77	97.127	16.294
78	97.297	16.242
79	97.468	16.269
80	97.621	14.688
81	97.698	7.337
82	97.769	6.741
83	97.840	6.766
84	97.910	6.715
85	97.980	6.741
86	98.051	6.741
87	98.122	6.740
88	98.192	6.741
89	98.263	6.740
90	98.333	6.689
91	98.404	6.792
92	98.474	6.741
93	98.545	6.741
94	98.615	6.689
95	98.686	6.793
96	98.756	6.740
97	98.827	6.689
98	98.898	6.793
99	98.968	6.740
100	99.027	5.652
101	99.062	3.318
102	99.095	3.112
103	99.128	3.215
104	99.161	3.111
105	99.194	3.215
106	99.228	3.163
107	99.261	3.163
108	99.294	3.163
109	99.332	3.630

110	99.365	3.163
111	99.398	3.163
112	99.431	3.163
113	99.464	3.164
114	99.497	3.163
115	99.530	3.163
116	99.564	3.164
117	99.597	3.163
118	99.630	3.163
119	99.663	3.164
120	99.696	3.163
121	99.729	3.163
122	99.762	3.163
123	99.795	3.164
124	99.828	3.163
125	99.861	3.163
126	99.895	3.164
127	99.928	3.163
128	99.961	3.163
129	99.994	3.164
130	100.000	.582

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.52
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.50

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 99.9178
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 230.0213

---

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

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
16.083	114.2748	250.67	. . VQ . .
16.167	116.2361	284.78	. . V Q . .
16.250	118.4022	314.53	. . V Q . .
16.333	120.7752	344.56	. . .V Q . .
16.417	123.5413	401.64	. . .V . Q .
16.500	126.5510	437.00	. . . V . Q .
16.583	129.6063	443.63	. . . V . Q .
16.667	132.5084	421.39	. . . V . Q .
16.750	135.3092	406.67	. . . V . Q .
16.833	138.1717	415.63	. . . V . Q .
16.917	140.7857	379.55	. . . V Q .
17.000	143.1843	348.27	. . . V Q . .
17.083	145.4684	331.66	. . . VQ . .
17.167	147.6576	317.87	. . . Q . .
17.250	149.7878	309.30	. . . Q V . .
17.333	151.8169	294.62	. . . Q V . .
17.417	153.7577	281.80	. . . Q V . .
17.500	155.6156	269.78	. . .Q V . .
17.583	157.3721	255.04	. . Q V . .
17.667	159.0619	245.37	. . Q. V . .
17.750	160.6709	233.63	. . Q . V . .
17.833	162.2061	222.90	. . Q . V . .
17.917	163.6824	214.36	. . Q . V . .
18.000	165.0949	205.10	. . Q . V . .
18.083	166.4672	199.26	. . Q . V . .
18.167	167.7886	191.86	. . Q . V. .
18.250	169.0709	186.19	. . Q . V. .
18.333	170.3221	181.67	. . Q . V. .
18.417	171.5384	176.61	. . Q . V. .
18.500	172.7315	173.24	. . Q . V .
18.583	173.8906	168.30	. . Q . V .
18.667	175.0241	164.57	. . Q . V .
18.750	176.1359	161.44	. . Q . V .
18.833	177.2226	157.79	. . Q . V .
18.917	178.2911	155.14	. . Q . .V .
19.000	179.3322	151.16	. . Q . .V .
19.083	180.3528	148.20	. .Q . .V .
19.167	181.3571	145.82	. .Q . .V .
19.250	182.3442	143.33	. .Q . .V .
19.333	183.3139	140.81	. .Q . .V .
19.417	184.2546	136.59	. Q . . V .
19.500	185.1765	133.85	. Q . . V .
19.583	186.0861	132.09	. Q . . V .
19.667	186.9846	130.45	. Q . . V .
19.750	187.8709	128.69	. Q . . V .
19.833	188.7431	126.65	. Q . . V .
19.917	189.6034	124.91	. Q. . . V .
20.000	190.4531	123.37	. Q. . . V .

****
FLOW PROCESS FROM NODE 2.07 TO NODE 2.09 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 20.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3930.00
DOWNSTREAM ELEVATION = 3750.00
CHANNEL LENGTH(FT) = 7700.00 MANNING'S FACTOR = .040
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 443.63
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 305.79
CHANNEL NORMAL VELOCITY FOR Q = 305.79 CFS = 7.08 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .806

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .602

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	121.3	114.7	114.7
14.167	125.3	116.1	116.1
14.250	130.2	117.7	117.7
14.333	136.0	120.1	120.1
14.417	143.8	123.4	123.4
14.500	153.0	127.8	127.8
14.583	162.4	133.1	133.1
14.667	171.0	140.0	140.0
14.750	179.0	148.2	148.2
14.833	187.5	157.2	157.2
14.917	194.7	165.9	165.9
15.000	200.8	174.2	174.2
15.083	206.5	182.6	182.6
15.167	211.7	190.2	190.2
15.250	217.0	196.8	196.8
15.333	222.1	202.9	202.9
15.417	225.5	208.5	208.5
15.500	227.0	213.9	213.9
15.583	227.3	219.0	219.0
15.667	226.7	223.0	223.0
15.750	223.4	225.4	225.4
15.833	219.0	226.5	226.5
15.917	216.4	226.5	226.5
16.000	219.4	224.4	224.4
16.083	250.7	221.0	221.0
16.167	284.8	218.4	218.4

16.250	314.5	220.4	220.4
16.333	344.6	240.2	240.2
16.417	401.6	268.5	268.5
16.500	437.0	297.6	297.6
16.583	443.6	328.6	328.6
16.667	421.4	374.2	374.2
16.750	406.7	412.3	412.3
16.833	415.6	430.1	430.1
16.917	379.6	424.2	424.2
17.000	348.3	414.1	414.1
17.083	331.7	413.3	413.3
17.167	317.9	391.5	391.5
17.250	309.3	364.7	364.7
17.333	294.6	344.2	344.2
17.417	281.8	327.9	327.9
17.500	269.8	316.0	316.0
17.583	255.0	302.5	302.5
17.667	245.4	289.5	289.5
17.750	233.6	276.9	276.9
17.833	222.9	263.3	263.3
17.917	214.4	251.9	251.9
18.000	205.1	240.4	240.4
18.083	199.3	229.5	229.5
18.167	191.9	219.9	219.9
18.250	186.2	210.7	210.7
18.333	181.7	203.5	203.5
18.417	176.6	196.2	196.2
18.500	173.2	190.0	190.0
18.583	168.3	184.7	184.7
18.667	164.6	179.7	179.7
18.750	161.4	175.6	175.6
18.833	157.8	171.0	171.0
18.917	155.1	167.0	167.0
19.000	151.2	163.5	163.5

```
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =    230.021 AF
    OUTFLOW VOLUME =    230.021 AF
    LOSS    VOLUME =       .000 AF
================================================================================

  END OF FLOOD ROUTING ANALYSIS
```

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

           F L O O D    R O U T I N G    A N A L Y S I S
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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.17                              *
*                  HYDROGRAPH AT NODE 2.09 ROUTED TO 2.11                *
*                                                                        *
 **************************************************************************

  FILE NAME: H209-117.INP
  TIME/DATE OF STUDY:  8: 6   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.09 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    1529.300 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.129 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .600
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .332
        LOW LOSS FRACTION =  .360
        *HYDROGRAPH MODEL #2 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 14.762

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.417	131.054
2	4.993	330.711
3	10.417	501.553
4	18.979	791.738
5	28.896	917.072
6	37.874	830.294
7	47.224	864.620
8	54.293	653.681
9	59.196	453.410
10	63.052	356.633
11	66.274	297.953
12	68.966	248.940
13	71.310	216.756
14	73.460	198.804
15	75.354	175.125
16	77.118	163.143
17	78.696	145.939
18	80.127	132.331
19	81.439	121.270
20	82.629	110.051
21	83.743	103.007
22	84.721	90.461
23	85.632	84.261
24	86.476	78.073
25	87.221	68.828
26	87.923	64.943
27	88.599	62.510
28	89.202	55.785
29	89.705	46.481
30	90.207	46.422
31	90.705	46.044
32	91.180	44.011
33	91.653	43.675
34	92.124	43.604
35	92.531	37.563
36	92.901	34.282
37	93.272	34.263
38	93.634	33.524
39	93.976	31.619
40	94.317	31.548
41	94.655	31.252
42	94.959	28.076
43	95.253	27.162
44	95.536	26.184
45	95.794	23.848
46	96.036	22.380
47	96.278	22.385

48	96.514	21.837
49	96.724	19.404
50	96.930	19.097
51	97.137	19.140
52	97.356	20.227
53	97.580	20.740
54	97.804	20.741
55	97.985	16.725
56	98.076	8.368
57	98.164	8.193
58	98.253	8.193
59	98.342	8.193
60	98.430	8.192
61	98.519	8.193
62	98.607	8.193
63	98.696	8.163
64	98.785	8.222
65	98.873	8.193
66	98.961	8.163
67	99.050	8.222
68	99.137	8.016
69	99.192	5.050
70	99.233	3.847
71	99.275	3.876
72	99.317	3.847
73	99.358	3.847
74	99.401	3.935
75	99.442	3.847
76	99.484	3.847
77	99.526	3.847
78	99.567	3.847
79	99.609	3.847
80	99.650	3.847
81	99.692	3.847
82	99.734	3.847
83	99.775	3.847
84	99.817	3.847
85	99.858	3.847
86	99.900	3.847
87	99.942	3.847
88	99.983	3.847
89	100.000	1.549

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.72
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.29

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 219.7856
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 418.9316

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	175.0	350.0	525.0	700.0
16.083	195.8660	432.98			V . Q	.	.
16.167	198.8479	432.98			V . Q	.	.
16.250	202.2527	494.37			V. Q	.	.
16.333	205.6574	494.37			V. Q	.	.
16.417	209.4592	552.02			V.	.Q	.
16.500	213.2610	552.02			V	.Q	.
16.583	217.6804	641.69			V	. Q	.
16.667	222.0998	641.69			V	. Q	.
16.750	226.7874	680.65			.V	. Q	.
16.833	231.4750	680.65			. V	. Q	.
16.917	236.0851	669.38			. V	. Q	.
17.000	240.6951	669.38			. V	. Q	.
17.083	245.3579	677.04			. V	. Q	.
17.167	250.0207	677.04			. V	. Q	.
17.250	254.2119	608.56			. V	. Q	.
17.333	258.4030	608.56			. V	. Q	.
17.417	262.1577	545.18			. V	.Q	.
17.500	265.9124	545.18			. V	.Q	.
17.583	269.3599	500.57			. V Q	.	.
17.667	272.8074	500.57			. V Q	.	.
17.750	275.9746	459.87			. Q	.	.
17.833	279.1418	459.87			. Q	.	.
17.917	282.0526	422.65			. Q V	.	.
18.000	284.9633	422.65			. Q V	.	.
18.083	287.6474	389.72			. Q V	.	.
18.167	290.3314	389.72			. Q V	.	.
18.250	292.8441	364.85			Q V	.	.
18.333	295.3569	364.85			Q V	.	.
18.417	297.7220	343.41			Q. V	.	.
18.500	300.0871	343.41			Q. V	.	.
18.583	302.3457	327.96			Q . V	.	.
18.667	304.6043	327.96			Q . V	.	.
18.750	306.7575	312.64			Q . V	.	.
18.833	308.9107	312.64			Q . V	.	.
18.917	310.9760	299.88			Q . V	.	.
19.000	313.0413	299.88			Q . V	.	.
19.083	315.0300	288.75			Q . V	.	.
19.167	317.0186	288.75			Q . V	.	.
19.250	318.9323	277.87			Q . V	.	.
19.333	320.8460	277.87			Q . V	.	.
19.417	322.6941	268.35			Q . V	.	.
19.500	324.5423	268.35			Q . V	.	.
19.583	326.3178	257.80			Q . V	.	.
19.667	328.0933	257.80			Q . V	.	.
19.750	329.8105	249.33			Q . V	.	.
19.833	331.5276	249.33			Q . V	.	.
19.917	333.1877	241.05			Q . V	.	.
20.000	334.8479	241.05			Q . V	.	.

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FLOW PROCESS FROM NODE 2.09 TO NODE 2.11 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

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THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 25.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3750.00
DOWNSTREAM ELEVATION = 3580.00
CHANNEL LENGTH(FT) = 7100.00 MANNING'S FACTOR = .038
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 680.65
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 477.83
CHANNEL NORMAL VELOCITY FOR Q = 477.83 CFS = 8.19 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .828

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .660

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	212.9	201.7	201.7
14.167	212.9	203.8	203.8
14.250	225.4	207.7	207.7
14.333	225.4	211.1	211.1
14.417	241.9	217.3	217.3
14.500	241.9	222.6	222.6
14.583	264.7	231.1	231.1
14.667	264.7	238.2	238.2
14.750	290.6	249.8	249.8
14.833	290.6	259.6	259.6
14.917	315.1	273.4	273.4
15.000	315.1	284.7	284.7
15.083	340.9	298.4	298.4
15.167	340.9	309.4	309.4
15.250	363.2	323.5	323.5
15.333	363.2	335.0	335.0
15.417	378.1	347.8	347.8
15.500	378.1	358.0	358.0
15.583	386.0	367.4	367.4
15.667	386.0	374.4	374.4
15.750	390.2	380.0	380.0
15.833	390.2	383.9	383.9
15.917	393.1	387.0	387.0
16.000	393.1	389.1	389.1
16.083	433.0	391.0	391.0
16.167	433.0	392.4	392.4

16.250	494.4	408.8	408.8
16.333	494.4	424.8	424.8
16.417	552.0	454.8	454.8
16.500	552.0	480.9	480.9
16.583	641.7	512.9	512.9
16.667	641.7	538.7	538.7
16.750	680.6	583.4	583.4
16.833	680.6	621.9	621.9
16.917	669.4	650.6	650.6
17.000	669.4	670.4	670.4
17.083	677.0	672.6	672.6
17.167	677.0	670.5	670.5
17.250	608.6	672.8	672.8
17.333	608.6	675.6	675.6
17.417	545.2	649.1	649.1
17.500	545.2	622.4	622.4
17.583	500.6	587.8	587.8
17.667	500.6	559.7	559.7
17.750	459.9	532.2	532.2
17.833	459.9	511.3	511.3
17.917	422.6	487.9	487.9
18.000	422.6	469.4	469.4
18.083	389.7	448.2	448.2
18.167	389.7	431.3	431.3
18.250	364.9	412.4	412.4
18.333	364.9	397.4	397.4
18.417	343.4	382.4	382.4
18.500	343.4	370.8	370.8
18.583	328.0	358.3	358.3
18.667	328.0	348.5	348.5
18.750	312.6	338.9	338.9
18.833	312.6	331.7	331.7
18.917	299.9	323.1	323.1
19.000	299.9	316.2	316.2

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 418.932 AF

OUTFLOW VOLUME = 418.932 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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           F L O O D   R O U T I N G   A N A L Y S I S
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 ************************** DESCRIPTION OF STUDY **************************
*                          DESIGN NODE 1.17                              *
*                 HYDROGRAPH AT NODE 2.11 ROUTED TO NODE 2.13            *
*                                                                        *
 **************************************************************************

  FILE NAME: H211-117.INP
  TIME/DATE OF STUDY:  8:10   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.11 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    4047.600 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.370 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .500
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .242
        LOW LOSS FRACTION =  .257
        *HYDROGRAPH MODEL #2 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
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UNIT INTERVAL PERCENTAGE OF LAG-TIME = 12.165

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.104	270.105
2	3.630	618.330
3	7.265	889.578
4	12.722	1335.793
5	20.120	1810.593
6	28.178	1972.232
7	35.696	1839.982
8	43.632	1942.450
9	51.509	1928.053
10	56.887	1316.063
11	61.226	1062.026
12	64.808	876.841
13	67.840	741.929
14	70.331	609.844
15	72.538	540.203
16	74.444	466.404
17	76.226	436.036
18	77.760	375.496
19	79.203	353.207
20	80.474	311.181
21	81.650	287.724
22	82.684	253.001
23	83.679	243.743
24	84.582	220.878
25	85.453	213.201
26	86.222	188.177
27	86.956	179.780
28	87.629	164.737
29	88.268	156.201
30	88.820	135.183
31	89.340	127.349
32	89.842	122.730
33	90.332	120.059
34	90.745	100.945
35	91.107	88.741
36	91.470	88.711
37	91.832	88.754
38	92.184	85.988
39	92.524	83.370
40	92.865	83.355
41	93.206	83.396
42	93.515	75.656
43	93.784	65.829
44	94.052	65.717
45	94.321	65.739
46	94.582	64.034
47	94.830	60.507

48	95.076	60.342
49	95.323	60.378
50	95.562	58.455
51	95.776	52.419
52	95.979	49.770
53	96.171	47.027
54	96.360	46.194
55	96.532	42.147
56	96.703	41.716
57	96.873	41.701
58	97.041	41.021
59	97.190	36.629
60	97.336	35.686
61	97.482	35.727
62	97.629	35.884
63	97.784	38.082
64	97.942	38.674
65	98.100	38.711
66	98.256	38.164
67	98.345	21.723
68	98.406	14.855
69	98.467	14.933
70	98.528	14.853
71	98.588	14.853
72	98.649	14.931
73	98.710	14.933
74	98.771	14.774
75	98.832	15.011
76	98.892	14.774
77	98.954	15.010
78	99.014	14.774
79	99.075	14.933
80	99.136	14.855
81	99.197	14.931
82	99.258	14.931
83	99.308	12.261
84	99.337	7.230
85	99.366	6.917
86	99.394	7.072
87	99.423	6.915
88	99.452	7.073
89	99.480	6.995
90	99.510	7.387
91	99.539	6.995
92	99.568	6.995
93	99.596	6.993
94	99.625	6.993
95	99.653	6.995
96	99.682	6.995
97	99.710	6.993
98	99.739	6.993
99	99.768	6.995
100	99.796	6.995
101	99.825	6.993
102	99.853	6.993
103	99.882	6.995
104	99.910	6.995
105	99.939	6.993
106	99.968	6.993
107	99.996	6.995
108	100.000	.930

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.23
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.78

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 415.5544
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1274.8540

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 475.0 950.0 1425.0 1900.0
16.083	578.6642	1280.61	. . V . Q . .
16.167	587.4838	1280.61	. . V . Q . .
16.250	597.0466	1388.52	. . V . Q. .
16.333	606.6094	1388.52	. . V. Q. .
16.417	616.9090	1495.50	. . V. .Q .
16.500	627.2086	1495.50	. . V. .Q .
16.583	638.5736	1650.21	. . V . Q .
16.667	649.9387	1650.21	. . V . Q .
16.750	662.2711	1790.68	. . V . Q .
16.833	674.6036	1790.68	. . V . Q .
16.917	687.3511	1850.94	. . .V . Q .
17.000	700.0986	1850.94	. . .V . Q .
17.083	712.7892	1842.68	. . . V . Q .
17.167	725.4799	1842.68	. . . V . Q .
17.250	738.4246	1879.57	. . . V . Q.
17.333	751.3693	1879.57	. . . V . Q.
17.417	763.9971	1833.55	. . . V . Q .
17.500	776.6248	1833.55	. . . V . Q .
17.583	787.8277	1626.65	. . . V . Q .
17.667	799.0306	1626.65	. . . V . Q .
17.750	809.4590	1514.21	. . . V .Q .
17.833	819.8875	1514.21	. . . V .Q .
17.917	829.5394	1401.45	. . . V Q. .
18.000	839.1912	1401.45	. . . V Q. .
18.083	848.1511	1300.98	. . . VQ . .
18.167	857.1110	1300.98	. . . VQ . .
18.250	865.3788	1200.49	. . . Q V . .
18.333	873.6467	1200.49	. . . Q V . .
18.417	881.3383	1116.81	. . . Q V . .
18.500	889.0298	1116.81	. . . Q V . .
18.583	896.2507	1048.46	. . . Q V . .
18.667	903.4715	1048.46	. . . Q V . .
18.750	910.3495	998.69	. . .Q V . .
18.833	917.2276	998.69	. . .Q V . .
18.917	923.7518	947.31	. . Q. V . .
19.000	930.2761	947.31	. . Q. V. .
19.083	936.5408	909.65	. . Q. V. .
19.167	942.8056	909.65	. . Q. V. .
19.250	948.8043	871.00	. . Q . V. .
19.333	954.8029	871.00	. . Q . V. .
19.417	960.5868	839.82	. . Q . V .
19.500	966.3707	839.82	. . Q . V .
19.583	971.9316	807.45	. . Q . V .
19.667	977.4926	807.45	. . Q . V .
19.750	982.8802	782.27	. . Q . V .
19.833	988.2678	782.27	. . Q . V .
19.917	993.4701	755.38	. . Q . .V .
20.000	998.6724	755.38	. . Q . .V .

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**************************************************************************
 FLOW PROCESS FROM NODE     2.11 TO NODE     2.13 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   30.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3580.00
          DOWNSTREAM ELEVATION =    3400.00
          CHANNEL LENGTH(FT) =    9800.00     MANNING'S FACTOR =  .035
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1879.57
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1362.03
          CHANNEL NORMAL VELOCITY FOR Q =  1362.03 CFS =  10.70 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .863

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .688


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
         MODEL        INFLOW     ROUTED      LOSS
          TIME      (STREAM 1)    FLOW     (STREAM 1)
         (HRS)       (CFS)       (CFS)       (CFS)
         14.083        632.2       601.0       601.0
         14.167        632.2       608.2       608.2
         14.250        662.8       615.7       615.7
         14.333        662.8       627.1       627.1
         14.417        701.2       638.3       638.3
         14.500        701.2       655.2       655.2
         14.583        751.7       670.1       670.1
         14.667        751.7       691.5       691.5
         14.750        814.7       710.8       710.8
         14.833        814.7       738.9       738.9
         14.917        883.2       763.5       763.5
         15.000        883.2       798.8       798.8
         15.083        950.2       827.0       827.0
         15.167        950.2       865.6       865.6
         15.250       1021.8       894.5       894.5
         15.333       1021.8       932.8       932.8
         15.417       1085.0       962.8       962.8
         15.500       1085.0      1003.4      1003.4
         15.583       1124.3      1032.0      1032.0
         15.667       1124.3      1068.4      1068.4
         15.750       1154.8      1089.7      1089.7
         15.833       1154.8      1113.5      1113.5
         15.917       1185.4      1128.6      1128.6
         16.000       1185.4      1146.7      1146.7
         16.083       1280.6      1160.0      1160.0
         16.167       1280.6      1177.5      1177.5
```

16.250	1388.5	1206.9	1206.9
16.333	1388.5	1257.6	1257.6
16.417	1495.5	1300.6	1300.6
16.500	1495.5	1361.1	1361.1
16.583	1650.2	1406.9	1406.9
16.667	1650.2	1467.9	1467.9
16.750	1790.7	1525.8	1525.8
16.833	1790.7	1611.4	1611.4
16.917	1850.9	1673.4	1673.4
17.000	1850.9	1754.1	1754.1
17.083	1842.7	1794.4	1794.4
17.167	1842.7	1833.3	1833.3
17.250	1879.6	1843.4	1843.4
17.333	1879.6	1842.9	1842.9
17.417	1833.6	1852.0	1852.0
17.500	1833.6	1871.0	1871.0
17.583	1626.7	1865.3	1865.3
17.667	1626.7	1843.5	1843.5
17.750	1514.2	1784.6	1784.6
17.833	1514.2	1675.9	1675.9
17.917	1401.5	1613.8	1613.8
18.000	1401.5	1545.3	1545.3
18.083	1301.0	1495.6	1495.6
18.167	1301.0	1430.8	1430.8
18.250	1200.5	1385.4	1385.4
18.333	1200.5	1327.3	1327.3
18.417	1116.8	1283.9	1283.9
18.500	1116.8	1226.5	1226.5
18.583	1048.5	1187.6	1187.6
18.667	1048.5	1138.9	1138.9
18.750	998.7	1106.5	1106.5
18.833	998.7	1066.6	1066.6
18.917	947.3	1041.6	1041.6
19.000	947.3	1012.1	1012.1

==========

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 1274.854 AF

OUTFLOW VOLUME = 1274.854 AF

LOSS VOLUME = .000 AF

==========

END OF FLOOD ROUTING ANALYSIS

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

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

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     TELEPHONE: (714) 586 - 6121          FAX: (714) 586 - 2217

 ************************* DESCRIPTION OF STUDY *************************
*                         DESIGN NODE 1.17                               *
*                  HYDROGRAPH AT NODE 2.13 ROUTED TO NODE 2.15           *
*                                                                        *
 **************************************************************************

  FILE NAME: H213-117.INP
  TIME/DATE OF STUDY:  8:14   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.13 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    4510.000 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.624 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .500
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .248
        LOW LOSS FRACTION =  .265
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 15.394

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.397	253.969
2	4.981	651.586
3	10.665	1033.387
4	19.580	1620.944
5	29.666	1833.750
6	39.177	1729.084
7	49.564	1888.553
8	56.815	1318.187
9	62.185	976.322
10	66.451	775.601
11	69.816	611.880
12	72.633	512.019
13	75.028	435.601
14	77.135	382.996
15	78.987	336.713
16	80.610	295.050
17	82.052	262.250
18	83.330	232.343
19	84.503	213.148
20	85.592	198.033
21	86.547	173.674
22	87.438	161.885
23	88.248	147.312
24	88.943	126.474
25	89.595	118.404
26	90.219	113.502
27	90.757	97.778
28	91.216	83.396
29	91.674	83.399
30	92.125	81.927
31	92.557	78.499
32	92.988	78.360
33	93.405	75.963
34	93.749	62.496
35	94.083	60.712
36	94.416	60.501
37	94.730	57.017
38	95.036	55.666
39	95.342	55.642
40	95.625	51.587
41	95.889	47.827
42	96.152	47.817
43	96.406	46.314
44	96.625	39.781
45	96.841	39.176
46	97.052	38.403
47	97.240	34.193

48	97.425	33.595
49	97.610	33.687
50	97.806	35.648
51	98.006	36.386
52	98.206	36.363
53	98.341	24.521
54	98.418	13.979
55	98.495	14.001
56	98.572	14.026
57	98.649	13.932
58	98.726	14.025
59	98.803	14.025
60	98.880	13.979
61	98.957	13.978
62	99.034	13.978
63	99.111	14.026
64	99.188	13.978
65	99.265	13.978
66	99.320	10.012
67	99.356	6.551
68	99.392	6.597
69	99.428	6.551
70	99.464	6.597
71	99.501	6.736
72	99.538	6.597
73	99.574	6.597
74	99.610	6.597
75	99.646	6.597
76	99.683	6.597
77	99.719	6.597
78	99.755	6.597
79	99.792	6.597
80	99.828	6.597
81	99.864	6.597
82	99.900	6.597
83	99.937	6.597
84	99.973	6.597
85	100.000	4.908

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.28
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.73

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 481.8463
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1401.6850

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	475.0	950.0	1425.0	1900.0
16.083	607.0512	1341.91	.	.	V .	Q .	.
16.167	616.2930	1341.91	.	.	V .	Q .	.
16.250	625.5349	1341.91	.	.	V .	Q .	.
16.333	635.7479	1482.94	.	.	V .	.Q	.
16.417	645.9610	1482.94	.	.	V .	.Q	.
16.500	656.1741	1482.94	.	.	V .	.Q	.
16.583	667.4460	1636.69	.	.	V.	. Q	.
16.667	678.7180	1636.69	.	.	V.	. Q	.
16.750	689.9900	1636.69	.	.	V.	. Q	.
16.833	702.4969	1816.01	.	.	V	.	Q .
16.917	715.0039	1816.01	.	.	V	.	Q .
17.000	727.5109	1816.01	.	.	V	.	Q .
17.083	740.4731	1882.13	.	.	.V	.	Q.
17.167	753.4354	1882.13	.	.	.V	.	Q.
17.250	766.3977	1882.13	.	.	.V	.	Q.
17.333	779.2990	1873.27	.	.	. V	.	Q.
17.417	792.2003	1873.27	.	.	. V	.	Q.
17.500	805.1016	1873.27	.	.	. V	.	Q.
17.583	817.9655	1867.82	.	.	. V	.	Q.
17.667	830.8293	1867.82	.	.	. V	.	Q.
17.750	843.6931	1867.82	.	.	. V	.	Q.
17.833	855.0549	1649.74	.	.	. V	. Q	.
17.917	866.4167	1649.74	.	.	. V	. Q	.
18.000	877.7786	1649.74	.	.	. V	. Q	.
18.083	887.9858	1482.10	.	.	. V	.Q	.
18.167	898.1931	1482.10	.	.	. V	.Q	.
18.250	908.4004	1482.10	.	.	. V	.Q	.
18.333	917.6597	1344.46	.	.	. V Q	.	.
18.417	926.9191	1344.46	.	.	. V Q	.	.
18.500	936.1784	1344.46	.	.	. V Q	.	.
18.583	944.5120	1210.03	.	.	. QV	.	.
18.667	952.8455	1210.03	.	.	. Q V	.	.
18.750	961.1791	1210.03	.	.	. Q V	.	.
18.833	968.8517	1114.08	.	.	. Q V	.	.
18.917	976.5244	1114.08	.	.	. Q V	.	.
19.000	984.1971	1114.08	.	.	. Q V	.	.
19.083	991.3486	1038.41	.	.	.Q V	.	.
19.167	998.5002	1038.41	.	.	.Q V	.	.
19.250	1005.6520	1038.41	.	.	.Q V	.	.
19.333	1012.3840	977.46	.	.	Q V	.	.
19.417	1019.1150	977.46	.	.	Q V	.	.
19.500	1025.8470	977.46	.	.	Q V	.	.
19.583	1032.2270	926.31	.	.	Q. V	.	.
19.667	1038.6060	926.31	.	.	Q. V	.	.
19.750	1044.9860	926.31	.	.	Q. V	.	.
19.833	1051.0420	879.35	.	.	Q . V	.	.
19.917	1057.0980	879.35	.	.	Q . V	.	.
20.000	1063.1540	879.35	.	.	Q . V	.	.

```
**************************************************************************
 FLOW PROCESS FROM NODE     2.13 TO NODE     2.15 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

      THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
      TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
      INTERVALS(Reference: the National Engineering Handbook,
      Hydrology, Chapter 17, page 17-52, August,1972,
      U.S. Department of Commerce).


      ASSUMED REGULAR CHANNEL INFORMATION:
        BASEWIDTH(FT) =   30.00     CHANNEL Z =  3.00
        UPSTREAM ELEVATION =    3400.00
        DOWNSTREAM ELEVATION =    3300.00
        CHANNEL LENGTH(FT) =    5800.00     MANNING'S FACTOR =  .035
        CONSTANT LOSS RATE(CFS) =     .00


      CHANNEL ROUTING COEFFICIENT ESTIMATED:
        MAXIMUM INFLOW(CFS) =  1882.13
        AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1397.13
        CHANNEL NORMAL VELOCITY FOR Q =  1397.13 CFS =  10.54 FPS
        ESTIMATED CHANNEL ROUTING COEFFICIENT =  .861

      MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
      UNIT INTERVALS IS CSTAR =  .775


      CONVEX METHOD CHANNEL ROUTING RESULTS:
                                        OUTFLOW LESS
       MODEL        INFLOW     ROUTED      LOSS
        TIME      (STREAM 1)    FLOW     (STREAM 1)
       (HRS)       (CFS)       (CFS)       (CFS)
       14.083        679.2       648.7       648.7
       14.167        679.2       658.9       658.9
       14.250        679.2       674.6       674.6
       14.333        726.5       678.2       678.2
       14.417        726.5       694.3       694.3
       14.500        726.5       719.2       719.2
       14.583        790.8       724.9       724.9
       14.667        790.8       747.0       747.0
       14.750        790.8       780.9       780.9
       14.833        879.2       788.6       788.6
       14.917        879.2       819.1       819.1
       15.000        879.2       865.7       865.7
       15.083        979.2       876.2       876.2
       15.167        979.2       911.1       911.1
       15.250        979.2       963.8       963.8
       15.333       1070.5       975.7       975.7
       15.417       1070.5      1008.1      1008.1
       15.500       1070.5      1056.4      1056.4
       15.583       1155.8      1067.3      1067.3
       15.667       1155.8      1097.5      1097.5
       15.750       1155.8      1142.7      1142.7
       15.833       1225.7      1152.9      1152.9
       15.917       1225.7      1177.9      1177.9
       16.000       1225.7      1215.0      1215.0
       16.083       1341.9      1223.3      1223.3
       16.167       1341.9      1263.0      1263.0
```

16.250	1341.9	1324.1	1324.1
16.333	1482.9	1337.9	1337.9
16.417	1482.9	1386.9	1386.9
16.500	1482.9	1461.3	1461.3
16.583	1636.7	1478.1	1478.1
16.667	1636.7	1531.9	1531.9
16.750	1636.7	1613.1	1613.1
16.833	1816.0	1631.4	1631.4
16.917	1816.0	1693.8	1693.8
17.000	1816.0	1788.5	1788.5
17.083	1882.1	1809.8	1809.8
17.167	1882.1	1836.1	1836.1
17.250	1882.1	1871.8	1871.8
17.333	1873.3	1879.8	1879.8
17.417	1873.3	1878.7	1878.7
17.500	1873.3	1874.5	1874.5
17.583	1867.8	1873.5	1873.5
17.667	1867.8	1871.6	1871.6
17.750	1867.8	1868.7	1868.7
17.833	1649.7	1868.0	1868.0
17.917	1649.7	1796.9	1796.9
18.000	1649.7	1682.9	1682.9
18.083	1482.1	1657.2	1657.2
18.167	1482.1	1596.9	1596.9
18.250	1482.1	1508.0	1508.0
18.333	1344.5	1487.9	1487.9
18.417	1344.5	1438.6	1438.6
18.500	1344.5	1365.7	1365.7
18.583	1210.0	1349.2	1349.2
18.667	1210.0	1301.8	1301.8
18.750	1210.0	1230.7	1230.7
18.833	1114.1	1214.7	1214.7
18.917	1114.1	1179.9	1179.9
19.000	1114.1	1128.9	1128.9

==========

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 1401.684 AF

OUTFLOW VOLUME = 1401.685 AF

LOSS VOLUME = .000 AF

==========

END OF FLOOD ROUTING ANALYSIS

117/212

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

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

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 ************************** DESCRIPTION OF STUDY **************************
*                          DESIGN NODE 1.17                                *
*                 HYDROGRAPH AT NODE 2.15 ROUTED TO NODE 2.17              *
*                                                                          *
 ****************************************************************************

  FILE NAME: H215-117.INP
  TIME/DATE OF STUDY:  8:24   6/25/1992


*****************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.15 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
=============================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    5333.000 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.777 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .252
        LOW LOSS FRACTION =  .273
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 14.069

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.223	262.850
2	4.198	639.622
3	8.776	984.173
4	16.018	1556.953
5	24.931	1916.162
6	33.849	1917.328
7	43.399	2053.206
8	52.736	2007.236
9	59.143	1377.460
10	64.146	1075.561
11	68.208	873.198
12	71.419	690.474
13	74.094	574.947
14	76.356	486.315
15	78.374	433.918
16	80.090	368.862
17	81.637	332.582
18	82.977	288.101
19	84.151	252.336
20	85.250	236.359
21	86.240	212.831
22	87.173	200.541
23	87.994	176.578
24	88.771	167.036
25	89.486	153.597
26	90.093	130.642
27	90.651	119.944
28	91.185	114.679
29	91.688	108.126
30	92.084	85.150
31	92.466	82.280
32	92.849	82.263
33	93.219	79.623
34	93.578	77.125
35	93.937	77.133
36	94.287	75.168
37	94.573	61.644
38	94.849	59.318
39	95.125	59.343
40	95.391	57.063
41	95.642	53.917
42	95.892	53.894
43	96.141	53.383
44	96.362	47.686
45	96.576	46.000
46	96.790	46.018
47	96.995	44.058

48	97.166	36.685
49	97.336	36.623
50	97.506	36.457
51	97.660	33.124
52	97.808	31.738
53	97.955	31.738
54	98.106	32.358
55	98.264	34.031
56	98.423	34.172
57	98.581	34.054
58	98.676	20.319
59	98.732	12.082
60	98.788	12.106
61	98.845	12.128
62	98.901	12.034
63	98.957	12.129
64	99.014	12.129
65	99.070	12.082
66	99.126	12.082
67	99.182	12.082
68	99.239	12.129
69	99.295	12.082
70	99.351	12.129
71	99.407	12.082
72	99.451	9.361
73	99.477	5.682
74	99.504	5.731
75	99.530	5.682
76	99.557	5.683
77	99.583	5.683
78	99.612	6.064
79	99.638	5.683
80	99.664	5.682
81	99.691	5.682
82	99.717	5.683
83	99.744	5.682
84	99.770	5.683
85	99.797	5.682
86	99.823	5.682
87	99.849	5.683
88	99.876	5.682
89	99.902	5.683
90	99.929	5.682
91	99.955	5.682
92	99.982	5.683
93	100.000	3.958

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.32
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.69

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 586.5887
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1640.6640

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 550.0 1100.0 1650.0 2200.0
16.083	695.8034	1529.87	. . V . Q . .
16.167	706.3397	1529.87	. . V . Q . .
16.250	716.8759	1529.87	. . V . Q . .
16.333	728.4342	1678.26	. . V . Q . .
16.417	739.9925	1678.26	. . V . Q . .
16.500	751.5508	1678.26	. . V . Q . .
16.583	764.1609	1830.99	. . V . . Q . .
16.667	776.7710	1830.99	. . V . . Q . .
16.750	789.3811	1830.99	. . V. . Q . .
16.833	803.3225	2024.29	. . V. . Q . .
16.917	817.2639	2024.29	. . V. . Q . .
17.000	831.2053	2024.29	. . V . Q . .
17.083	845.8411	2125.11	. . V . Q . .
17.167	860.4768	2125.11	. . V . Q . .
17.250	875.1125	2125.11	. . V . Q . .
17.333	889.8556	2140.69	. .V . Q . .
17.417	904.5986	2140.69	. . V . Q . .
17.500	919.3417	2140.69	. . V . Q . .
17.583	934.2794	2168.95	. . V . Q.
17.667	949.2170	2168.95	. . V . Q.
17.750	964.1547	2168.95	. . V . Q.
17.833	978.4952	2082.25	. . V . Q . .
17.917	992.8358	2082.25	. . V . Q . .
18.000	1007.1760	2082.25	. . V . Q . .
18.083	1019.8380	1838.46	. . V . Q . .
18.167	1032.5000	1838.46	. . V . Q . .
18.250	1045.1610	1838.46	. . V . Q . .
18.333	1056.6940	1674.51	. . V Q . .
18.417	1068.2260	1674.51	. . V Q . .
18.500	1079.7590	1674.51	. . V Q . .
18.583	1090.2320	1520.74	. . VQ . .
18.667	1100.7050	1520.74	. . VQ . .
18.750	1111.1790	1520.74	. . Q . .
18.833	1120.6450	1374.51	. . Q V . .
18.917	1130.1110	1374.51	. . Q V . .
19.000	1139.5780	1374.51	. . Q V . .
19.083	1148.3190	1269.25	. . Q V . .
19.167	1157.0610	1269.25	. . Q V . .
19.250	1165.8020	1269.25	. . Q V . .
19.333	1173.9560	1183.97	. .Q V . .
19.417	1182.1100	1183.97	. .Q V . .
19.500	1190.2640	1183.97	. .Q V. .
19.583	1197.9520	1116.33	. . Q V. .
19.667	1205.6410	1116.33	. . Q V. .
19.750	1213.3290	1116.33	. . Q V. .
19.833	1220.5970	1055.33	. . Q. V. .
19.917	1227.8650	1055.33	. . Q. V. .
20.000	1235.1330	1055.33	. . Q. V .

```
**************************************************************************
 FLOW PROCESS FROM NODE     2.15 TO NODE     2.17 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

       THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
       TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
       INTERVALS(Reference: the National Engineering Handbook,
       Hydrology, Chapter 17, page 17-52, August,1972,
       U.S. Department of Commerce).


       ASSUMED REGULAR CHANNEL INFORMATION:
         BASEWIDTH(FT) =   30.00     CHANNEL Z =  3.00
         UPSTREAM ELEVATION =    3300.00
         DOWNSTREAM ELEVATION =    3175.00
         CHANNEL LENGTH(FT) =    8000.00     MANNING'S FACTOR =  .030
         CONSTANT LOSS RATE(CFS) =     .00


       CHANNEL ROUTING COEFFICIENT ESTIMATED:
         MAXIMUM INFLOW(CFS) =  2168.95
         AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1606.27
         CHANNEL NORMAL VELOCITY FOR Q =  1606.27 CFS =  11.84 FPS
         ESTIMATED CHANNEL ROUTING COEFFICIENT =  .874

       MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
       UNIT INTERVALS IS CSTAR =  .752


       CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
        MODEL        INFLOW     ROUTED       LOSS
         TIME      (STREAM 1)    FLOW     (STREAM 1)
        (HRS)       (CFS)       (CFS)       (CFS)
        14.083        782.6       749.7       749.7
        14.167        782.6       751.2       751.2
        14.250        782.6       774.8       774.8
        14.333        831.4       780.7       780.7
        14.417        831.4       783.2       783.2
        14.500        831.4       819.4       819.4
        14.583        896.0       828.4       828.4
        14.667        896.0       832.1       832.1
        14.750        896.0       880.2       880.2
        14.833        984.8       892.1       892.1
        14.917        984.8       897.1       897.1
        15.000        984.8       963.1       963.1
        15.083       1090.8       979.4       979.4
        15.167       1090.8       985.9       985.9
        15.250       1090.8      1064.8      1064.8
        15.333       1192.2      1084.3      1084.3
        15.417       1192.2      1091.5      1091.5
        15.500       1192.2      1167.2      1167.2
        15.583       1288.1      1186.0      1186.0
        15.667       1288.1      1192.8      1192.8
        15.750       1288.1      1264.5      1264.5
        15.833       1389.8      1282.3      1282.3
        15.917       1389.8      1289.0      1289.0
        16.000       1389.8      1364.8      1364.8
        16.083       1529.9      1383.6      1383.6
        16.167       1529.9      1391.5      1391.5
```

16.250	1529.9	1495.5	1495.5
16.333	1678.3	1521.4	1521.4
16.417	1678.3	1531.2	1531.2
16.500	1678.3	1641.8	1641.8
16.583	1831.0	1669.2	1669.2
16.667	1831.0	1679.5	1679.5
16.750	1831.0	1793.4	1793.4
16.833	2024.3	1821.7	1821.7
16.917	2024.3	1833.1	1833.1
17.000	2024.3	1976.9	1976.9
17.083	2125.1	2012.5	2012.5
17.167	2125.1	2023.7	2023.7
17.250	2125.1	2099.9	2099.9
17.333	2140.7	2118.9	2118.9
17.417	2140.7	2123.9	2123.9
17.500	2140.7	2136.5	2136.5
17.583	2168.9	2139.7	2139.7
17.667	2168.9	2141.1	2141.1
17.750	2168.9	2162.0	2162.0
17.833	2082.2	2167.2	2167.2
17.917	2082.2	2166.5	2166.5
18.000	2082.2	2103.2	2103.2
18.083	1838.5	2087.4	2087.4
18.167	1838.5	2077.9	2077.9
18.250	1838.5	1897.9	1897.9
18.333	1674.5	1853.2	1853.2
18.417	1674.5	1838.4	1838.4
18.500	1674.5	1715.2	1715.2
18.583	1520.7	1684.6	1684.6
18.667	1520.7	1673.5	1673.5
18.750	1520.7	1558.6	1558.6
18.833	1374.5	1530.1	1530.1
18.917	1374.5	1519.7	1519.7
19.000	1374.5	1410.5	1410.5

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 1640.665 AF

OUTFLOW VOLUME = 1640.664 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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

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                        Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.17                              *
*                HYDROGRAPH AT NODE 2.17 ROUTED TO NODE 1.17             *
*                                                                        *
 **************************************************************************

  FILE NAME: H217-117.INP
  TIME/DATE OF STUDY:  8:27   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.17 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    5852.000 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.965 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .246
        LOW LOSS FRACTION =  .264
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 12.723

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.087	256.404
2	3.608	594.732
3	7.332	878.608
4	13.165	1376.067
5	20.852	1813.467
6	29.065	1937.523
7	37.061	1886.124
8	46.359	2193.686
9	54.159	1840.076
10	59.969	1370.426
11	64.627	1099.004
12	68.473	907.177
13	71.574	731.592
14	74.162	610.585
15	76.328	510.878
16	78.295	464.192
17	79.953	391.183
18	81.439	350.532
19	82.752	309.691
20	83.895	269.638
21	84.895	236.006
22	85.850	225.227
23	86.715	203.994
24	87.545	195.769
25	88.276	172.589
26	88.977	165.355
27	89.617	150.960
28	90.202	137.956
29	90.694	116.007
30	91.168	111.833
31	91.619	106.475
32	92.048	101.113
33	92.385	79.625
34	92.711	76.848
35	93.037	76.830
36	93.358	75.879
37	93.665	72.359
38	93.970	72.048
39	94.276	72.010
40	94.564	67.928
41	94.808	57.712
42	95.050	57.046
43	95.292	57.091
44	95.528	55.611
45	95.750	52.384
46	95.971	52.266
47	96.193	52.239

48	96.404	49.701
49	96.585	42.833
50	96.753	39.622
51	96.921	39.620
52	97.080	37.591
53	97.228	34.883
54	97.376	34.766
55	97.523	34.870
56	97.661	32.476
57	97.788	30.016
58	97.916	30.018
59	98.043	30.014
60	98.176	31.319
61	98.313	32.392
62	98.450	32.421
63	98.587	32.334
64	98.672	19.870
65	98.722	11.994
66	98.773	12.025
67	98.824	11.994
68	98.875	11.994
69	98.926	11.996
70	98.977	12.052
71	99.028	11.994
72	99.079	11.994
73	99.130	11.996
74	99.180	11.994
75	99.231	12.054
76	99.282	11.994
77	99.333	11.994
78	99.384	11.994
79	99.433	11.532
80	99.461	6.722
81	99.486	5.736
82	99.510	5.621
83	99.533	5.621
84	99.557	5.678
85	99.581	5.619
86	99.606	5.911
87	99.630	5.621
88	99.654	5.621
89	99.678	5.621
90	99.702	5.621
91	99.725	5.619
92	99.749	5.621
93	99.773	5.621
94	99.797	5.621
95	99.821	5.621
96	99.845	5.619
97	99.868	5.621
98	99.892	5.621
99	99.916	5.621
100	99.940	5.621
101	99.964	5.619
102	99.987	5.621
103	100.000	2.950

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.28

TOTAL EFFECTIVE RAINFALL(INCHES) = 3.74

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 622.7359
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1821.2590

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	600.0	1200.0	1800.0	2400.0
16.083	749.8987	1626.90			V	Q	
16.167	761.1033	1626.90			V	Q	
16.250	772.3078	1626.90			V	Q	
16.333	784.5627	1779.41			V	Q	
16.417	796.8176	1779.41			V	Q	
16.500	809.0724	1779.41			V	Q	
16.583	822.3094	1922.00			V	Q	
16.667	835.5463	1922.00			V	Q	
16.750	848.7833	1922.00			V	Q	
16.833	863.3671	2117.57			V	Q	
16.917	877.9510	2117.57			V	Q	
17.000	892.5349	2117.57			V	Q	
17.083	908.0408	2251.46			V	Q	
17.167	923.5467	2251.46			V	Q	
17.250	939.0526	2251.46			V	Q	
17.333	954.7687	2281.98			V	Q	
17.417	970.4849	2281.98			V	Q	
17.500	986.2010	2281.98			V	Q	
17.583	1001.9320	2284.17			V	Q	
17.667	1017.6630	2284.17			V	Q	
17.750	1033.3940	2284.17			V	Q	
17.833	1049.3650	2318.91			V	Q	
17.917	1065.3350	2318.91			V	Q	
18.000	1081.3060	2318.91			V	Q	
18.083	1096.0810	2145.37			V	Q	
18.167	1110.8560	2145.37			V	Q	
18.250	1125.6320	2145.37			V	Q	
18.333	1138.9960	1940.56			V	Q	
18.417	1152.3610	1940.56			V	Q	
18.500	1165.7260	1940.56			V	Q	
18.583	1177.9910	1780.86			V	Q	
18.667	1190.2560	1780.86			V	Q	
18.750	1202.5210	1780.86			V	Q	
18.833	1213.7050	1623.96			VQ		
18.917	1224.8890	1623.96			VQ		
19.000	1236.0730	1623.96			Q		
19.083	1246.2880	1483.09			Q V		
19.167	1256.5020	1483.09			Q V		
19.250	1266.7160	1483.09			Q V		
19.333	1276.1800	1374.23			Q V		
19.417	1285.6450	1374.23			Q V		
19.500	1295.1090	1374.23			Q V		
19.583	1303.9480	1283.47			Q V		
19.667	1312.7880	1283.47			Q V		
19.750	1321.6270	1283.47			Q V		
19.833	1329.9910	1214.47			Q V		
19.917	1338.3550	1214.47			Q V		
20.000	1346.7190	1214.47			Q V		

```
**************************************************************************
 FLOW PROCESS FROM NODE     2.17 TO NODE     1.17 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   35.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3175.00
          DOWNSTREAM ELEVATION =    3070.00
          CHANNEL LENGTH(FT) =    7500.00     MANNING'S FACTOR =  .030
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  2318.91
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1762.99
          CHANNEL NORMAL VELOCITY FOR Q =  1762.99 CFS =  11.43 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .871

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .753


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
         MODEL        INFLOW     ROUTED      LOSS
          TIME      (STREAM 1)    FLOW     (STREAM 1)
         (HRS)       (CFS)       (CFS)       (CFS)
         14.083        850.1       817.9       817.9
         14.167        850.1       821.0       821.0
         14.250        850.1       842.9       842.9
         14.333        898.0       848.4       848.4
         14.417        898.0       853.2       853.2
         14.500        898.0       886.9       886.9
         14.583        960.3       895.3       895.3
         14.667        960.3       901.9       901.9
         14.750        960.3       945.9       945.9
         14.833       1044.7       956.7       956.7
         14.917       1044.7       965.5       965.5
         15.000       1044.7      1025.1      1025.1
         15.083       1149.6      1039.9      1039.9
         15.167       1149.6      1051.1      1051.1
         15.250       1149.6      1125.2      1125.2
         15.333       1254.6      1143.6      1143.6
         15.417       1254.6      1155.7      1155.7
         15.500       1254.6      1230.2      1230.2
         15.583       1349.4      1248.6      1248.6
         15.667       1349.4      1260.0      1260.0
         15.750       1349.4      1327.3      1327.3
         15.833       1464.4      1343.9      1343.9
         15.917       1464.4      1356.3      1356.3
         16.000       1464.4      1437.7      1437.7
         16.083       1626.9      1457.8      1457.8
         16.167       1626.9      1474.5      1474.5
```

16.250	1626.9	1589.2	1589.2
16.333	1779.4	1617.6	1617.6
16.417	1779.4	1635.6	1635.6
16.500	1779.4	1743.8	1743.8
16.583	1922.0	1770.6	1770.6
16.667	1922.0	1787.5	1787.5
16.750	1922.0	1888.7	1888.7
16.833	2117.6	1913.8	1913.8
16.917	2117.6	1934.1	1934.1
17.000	2117.6	2072.2	2072.2
17.083	2251.5	2106.4	2106.4
17.167	2251.5	2124.5	2124.5
17.250	2251.5	2220.0	2220.0
17.333	2282.0	2243.7	2243.7
17.417	2282.0	2251.7	2251.7
17.500	2282.0	2274.5	2274.5
17.583	2284.2	2280.1	2280.1
17.667	2284.2	2281.7	2281.7
17.750	2284.2	2283.6	2283.6
17.833	2318.9	2284.0	2284.0
17.917	2318.9	2286.6	2286.6
18.000	2318.9	2310.9	2310.9
18.083	2145.4	2316.9	2316.9
18.167	2145.4	2305.9	2305.9
18.250	2145.4	2185.1	2185.1
18.333	1940.6	2155.2	2155.2
18.417	1940.6	2133.0	2133.0
18.500	1940.6	1988.2	1988.2
18.583	1780.9	1952.3	1952.3
18.667	1780.9	1932.0	1932.0
18.750	1780.9	1818.2	1818.2
18.833	1624.0	1790.1	1790.1
18.917	1624.0	1771.8	1771.8
19.000	1624.0	1660.5	1660.5

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PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 1821.261 AF

OUTFLOW VOLUME = 1821.260 AF

LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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

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

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.17                             *
*          D E S I G N        H Y D R O G R A P H                      *
*                                                                       *
 *************************************************************************

  FILE NAME: H117-12.INP
  TIME/DATE OF STUDY:  8:41   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.17 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =   14484.000 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    2.207 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .223
        LOW LOSS FRACTION =  .246
        *HYDROGRAPH MODEL #4 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
```

UNIT INTERVAL PERCENTAGE OF LAG-TIME = 15.103

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.198	524.407
2	4.197	1313.623
3	9.123	2156.942
4	16.786	3355.892
5	26.030	4048.071
6	35.884	4315.123
7	48.049	5327.459
8	57.357	4076.083
9	64.181	2988.359
10	69.469	2315.420
11	73.543	1784.240
12	76.743	1401.245
13	79.349	1141.026
14	81.585	979.538
15	83.409	798.635
16	84.998	695.765
17	86.308	573.614
18	87.435	493.843
19	88.486	459.982
20	89.435	415.420
21	90.287	373.109
22	91.072	343.852
23	91.789	314.093
24	92.391	263.570
25	92.906	225.385
26	93.389	211.821
27	93.838	196.676
28	94.180	149.574
29	94.505	142.197
30	94.829	141.997
31	95.138	135.388
32	95.440	132.315
33	95.742	132.244
34	96.014	119.104
35	96.250	103.351
36	96.486	103.234
37	96.718	101.480
38	96.933	94.147
39	97.146	93.325
40	97.358	92.810
41	97.549	83.559
42	97.718	74.204
43	97.869	66.116
44	98.009	61.555
45	98.138	56.206
46	98.266	56.233
47	98.391	54.820

48	98.505	49.942
49	98.619	49.611
50	98.732	49.748
51	98.851	52.157
52	98.972	52.922
53	99.093	52.832
54	99.170	33.798
55	99.208	16.478
56	99.246	16.595
57	99.283	16.478
58	99.321	16.592
59	99.359	16.478
60	99.397	16.595
61	99.434	16.478
62	99.472	16.535
63	99.510	16.595
64	99.548	16.478
65	99.586	16.595
66	99.623	16.478
67	99.655	13.818
68	99.673	8.039
69	99.691	7.758
70	99.708	7.761
71	99.726	7.815
72	99.744	7.815
73	99.764	8.550
74	99.782	7.815
75	99.799	7.815
76	99.817	7.815
77	99.835	7.815
78	99.853	7.815
79	99.871	7.815
80	99.889	7.815
81	99.906	7.815
82	99.924	7.815
83	99.942	7.815
84	99.960	7.815
85	99.978	7.815
86	99.996	7.815
87	100.000	1.888

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.20
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.81

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1449.1730
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 4599.7940

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	1425.0	2850.0	4275.0	5700.0
16.083	1848.3930	3916.13	.	.	V .	Q .	.
16.167	1875.3630	3916.13	.	.	V .	Q .	.
16.250	1902.3340	3916.13	.	.	V .	Q .	.
16.333	1929.3050	3916.13	.	.	V .	Q .	.
16.417	1959.5520	4391.98	.	.	V .	Q	.
16.500	1989.8000	4391.98	.	.	V .	Q	.
16.583	2020.0480	4391.98	.	.	V .	Q	.
16.667	2050.2960	4391.98	.	.	V .	Q	.
16.750	2083.6820	4847.70	.	.	V .	. Q	.
16.833	2117.0680	4847.70	.	.	V .	. Q	.
16.917	2150.4540	4847.70	.	.	V .	. Q	.
17.000	2183.8410	4847.70	.	.	V .	. Q	.
17.083	2220.3670	5303.64	.	.	V.	.	Q .
17.167	2256.8930	5303.64	.	.	V.	.	Q .
17.250	2293.4200	5303.64	.	.	V.	.	Q .
17.333	2329.9460	5303.64	.	.	V	.	Q .
17.417	2367.6040	5467.86	.	.	V	.	Q .
17.500	2405.2610	5467.86	.	.	V	.	Q .
17.583	2442.9180	5467.86	.	.	V	.	Q .
17.667	2480.5760	5467.86	.	.	V	.	Q .
17.750	2518.9940	5578.38	.	.	.V	.	Q.
17.833	2557.4130	5578.38	.	.	. V	.	Q.
17.917	2595.8310	5578.38	.	.	. V	.	Q.
18.000	2634.2500	5578.38	.	.	. V	.	Q.
18.083	2673.2420	5661.72	.	.	. V	.	Q.
18.167	2712.2350	5661.72	.	.	. V	.	Q.
18.250	2751.2280	5661.72	.	.	. V	.	Q.
18.333	2790.2200	5661.72	.	.	. V	.	Q.
18.417	2825.6400	5142.95	.	.	. V	. Q	.
18.500	2861.0600	5142.95	.	.	. V	. Q	.
18.583	2896.4790	5142.95	.	.	. V	. Q	.
18.667	2931.8990	5142.95	.	.	. V	. Q	.
18.750	2963.5700	4598.67	.	.	. V	. Q	.
18.833	2995.2410	4598.67	.	.	. V	. Q	.
18.917	3026.9130	4598.67	.	.	. V	. Q	.
19.000	3058.5840	4598.67	.	.	. V	. Q	.
19.083	3086.6770	4079.18	.	.	. V Q	.	.
19.167	3114.7710	4079.18	.	.	. VQ	.	.
19.250	3142.8640	4079.18	.	.	. VQ	.	.
19.333	3170.9580	4079.18	.	.	. VQ	.	.
19.417	3196.0850	3648.45	.	.	. Q V	.	.
19.500	3221.2120	3648.45	.	.	. Q V	.	.
19.583	3246.3390	3648.45	.	.	. Q V	.	.
19.667	3271.4660	3648.45	.	.	. Q V	.	.
19.750	3294.2530	3308.75	.	.	. Q V	.	.
19.833	3317.0410	3308.75	.	.	. Q V	.	.
19.917	3339.8280	3308.75	.	.	. Q V.		.
20.000	3362.6160	3308.75	.	.	. Q V.		.

```
**************************************************************************
 FLOW PROCESS FROM NODE     2.00 TO NODE     1.17 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #2)

        WATERSHED AREA =    7823.000 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    2.147 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .255
        LOW LOSS FRACTION =  .278
        *HYDROGRAPH MODEL #4 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .65
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.12
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.38
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.04
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.61
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.19

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .506
         30-MINUTE FACTOR =  .534
          1-HOUR FACTOR =  .551
          3-HOUR FACTOR =  .879
          6-HOUR FACTOR =  .946
         24-HOUR FACTOR =  .966

        UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.526


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                1.232               291.281
       2                4.363               740.658
       3                9.584              1234.953
       4               17.640              1905.314
       5               27.233              2269.079
       6               37.592              2450.059
       7               50.085              2954.941
       8               58.944              2095.337
       9               65.555              1563.779
      10               70.652              1205.394
```

11	74.555	923.180
12	77.625	726.075
13	80.186	605.738
14	82.300	500.097
15	84.088	422.859
16	85.592	355.695
17	86.843	295.911
18	87.966	265.683
19	88.979	239.528
20	89.916	221.790
21	90.742	195.346
22	91.508	181.027
23	92.184	159.892
24	92.730	129.188
25	93.241	120.916
26	93.719	112.989
27	94.096	89.137
28	94.429	78.946
29	94.763	78.963
30	95.085	76.106
31	95.396	73.443
32	95.706	73.443
33	95.992	67.630
34	96.237	57.882
35	96.480	57.590
36	96.720	56.684
37	96.942	52.589
38	97.162	52.073
39	97.381	51.653
40	97.576	46.254
41	97.738	38.159
42	97.893	36.702
43	98.034	33.265
44	98.165	31.213
45	98.297	31.213
46	98.423	29.683
47	98.539	27.535
48	98.656	27.525
49	98.774	27.968
50	98.898	29.279
51	99.022	29.353
52	99.141	28.134
53	99.188	11.096
54	99.226	9.165
55	99.265	9.194
56	99.304	9.165
57	99.343	9.194
58	99.382	9.194
59	99.421	9.165
60	99.459	9.163
61	99.498	9.194
62	99.537	9.194
63	99.576	9.165
64	99.615	9.165
65	99.650	8.360
66	99.670	4.730
67	99.688	4.316
68	99.707	4.344
69	99.725	4.284
70	99.743	4.315
71	99.763	4.760
72	99.781	4.316

73	99.799	4.313
74	99.818	4.316
75	99.836	4.313
76	99.854	4.316
77	99.872	4.313
78	99.891	4.316
79	99.909	4.313
80	99.927	4.316
81	99.945	4.313
82	99.964	4.316
83	99.982	4.313
84	100.000	4.280

TOTAL STORM RAINFALL(INCHES) = 5.01
TOTAL SOIL-LOSS(INCHES) = 1.36
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.66

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 885.1843
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2381.9930

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 750.0 1500.0 2250.0 3000.0
16.083	965.4654	2063.00	. . V . Q . .
16.167	979.6734	2063.00	. . V . Q . .
16.250	993.8814	2063.00	. . V . Q . .
16.333	1008.0890	2063.00	. . V . Q . .
16.417	1024.0090	2311.53	. . V . Q .
16.500	1039.9290	2311.53	. . V . Q .
16.583	1055.8480	2311.53	. . V . Q .
16.667	1071.7680	2311.53	. . V . Q .
16.750	1089.3750	2556.56	. . V . . Q .
16.833	1106.9820	2556.56	. . V . . Q .
16.917	1124.5890	2556.56	. . V . . Q .
17.000	1142.1960	2556.56	. . V. . Q .
17.083	1161.4370	2793.71	. . V. . Q .
17.167	1180.6770	2793.71	. . V. . Q .
17.250	1199.9170	2793.71	. . V . Q .
17.333	1219.1580	2793.71	. . V . Q .
17.417	1238.9520	2874.10	. . V . Q .
17.500	1258.7460	2874.10	. . V . Q .
17.583	1278.5400	2874.10	. . V . Q .
17.667	1298.3340	2874.10	. . V . Q .
17.750	1318.5880	2940.92	. . . V . Q.
17.833	1338.8430	2940.92	. . . V . Q.
17.917	1359.0970	2940.92	. . . V . Q.
18.000	1379.3510	2940.92	. . . V . Q.
18.083	1399.7410	2960.54	. . . V . Q.
18.167	1420.1300	2960.54	. . . V . Q.
18.250	1440.5190	2960.54	. . . V . Q.
18.333	1460.9090	2960.54	. . . V . Q.
18.417	1479.0950	2640.59	. . . V . Q .
18.500	1497.2810	2640.59	. . . V . Q .
18.583	1515.4670	2640.59	. . . V . Q .
18.667	1533.6520	2640.59	. . . V . Q .
18.750	1549.8930	2358.14	. . . V .Q .
18.833	1566.1340	2358.14	. . . V .Q .
18.917	1582.3740	2358.14	. . . V .Q .
19.000	1598.6150	2358.14	. . . V .Q .
19.083	1612.9570	2082.53	. . . Q . .
19.167	1627.3000	2082.53	. . . Q . .
19.250	1641.6420	2082.53	. . . Q . .
19.333	1655.9850	2082.53	. . . Q . .
19.417	1668.8100	1862.17	. . . Q V . .
19.500	1681.6350	1862.17	. . . Q V . .
19.583	1694.4590	1862.17	. . . Q V . .
19.667	1707.2840	1862.17	. . . Q V . .
19.750	1718.9380	1692.08	. . . Q V . .
19.833	1730.5910	1692.08	. . . Q V. .
19.917	1742.2450	1692.08	. . . Q V. .
20.000	1753.8980	1692.08	. . . Q V. .

```
****************************************************************************
 FLOW PROCESS FROM NODE     1.17 TO NODE     1.17 IS CODE =   7
----------------------------------------------------------------------------
 >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
 FLOW PROCESS FROM NODE     1.17 TO NODE     1.17 IS CODE =  11
----------------------------------------------------------------------------
 >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
============================================================================

            STREAM HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

----------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     2175.0    4350.0    6525.0    8700.0
----------------------------------------------------------------------------
  16.083   2813.8580   5979.13  .        .     V   .     Q   .        .
  16.167   2855.0370   5979.13  .        .     V   .     Q   .        .
  16.250   2896.2160   5979.13  .        .     V   .     Q   .        .
  16.333   2937.3950   5979.13  .        .     V   .     Q   .        .
  16.417   2983.5620   6703.50  .        .      V  .        Q        .
  16.500   3029.7290   6703.50  .        .      V  .        Q        .
  16.583   3075.8970   6703.50  .        .      V  .        Q        .
  16.667   3122.0640   6703.50  .        .      V  .        Q        .
  16.750   3173.0580   7404.25  .        .       V .        .   Q    .
  16.833   3224.0510   7404.25  .        .       V .        .   Q    .
  16.917   3275.0450   7404.25  .        .       V .        .   Q    .
  17.000   3326.0380   7404.25  .        .        V.        .   Q    .
  17.083   3381.8050   8097.34  .        .        V.        .     Q  .
  17.167   3437.5720   8097.34  .        .        V.        .     Q  .
  17.250   3493.3390   8097.34  .        .         V        .     Q  .
  17.333   3549.1050   8097.34  .        .         V        .     Q  .
  17.417   3606.5570   8341.95  .        .         V        .      Q .
  17.500   3664.0080   8341.95  .        .         V        .      Q .
  17.583   3721.4600   8341.95  .        .         .V       .      Q .
  17.667   3778.9110   8341.95  .        .         .V       .      Q .
  17.750   3837.5840   8519.29  .        .         .V       .       Q.
  17.833   3896.2570   8519.29  .        .         . V      .       Q.
  17.917   3954.9300   8519.29  .        .         . V      .       Q.
  18.000   4013.6030   8519.29  .        .         . V      .       Q.
  18.083   4072.9850   8622.26  .        .         .  V     .       Q.
  18.167   4132.3670   8622.26  .        .         .  V     .       Q.
  18.250   4191.7490   8622.26  .        .         .   V    .       Q.
  18.333   4251.1300   8622.26  .        .         .   V    .       Q.
  18.417   4304.7360   7783.54  .        .         .   V    .    Q  .
  18.500   4358.3410   7783.54  .        .         .   V    .    Q  .
  18.583   4411.9470   7783.54  .        .         .    V   .    Q  .
  18.667   4465.5520   7783.54  .        .         .    V   .    Q  .
  18.750   4513.4640   6956.81  .        .         .    V   .Q       .
  18.833   4561.3760   6956.81  .        .         .     V  .Q       .
  18.917   4609.2890   6956.81  .        .         .     V  .Q       .
  19.000   4657.2010   6956.81  .        .         .     V  .Q       .
  19.083   4699.6370   6161.71  .        .         .     V Q .       .
  19.167   4742.0730   6161.71  .        .         .      VQ .       .
  19.250   4784.5090   6161.71  .        .         .      VQ .       .
  19.333   4826.9450   6161.71  .        .         .      VQ .       .
  19.417   4864.8970   5510.62  .        .         .    Q V  .       .
  19.500   4902.8490   5510.62  .        .         .    Q  V .       .
  19.583   4940.8010   5510.62  .        .         .    Q  V .       .
  19.667   4978.7530   5510.62  .        .         .    Q  V .       .
```

19.750	5013.1940	5000.83	.	.	.	Q	V	.	.
19.833	5047.6350	5000.83	.	.	.	Q	V	.	.
19.917	5082.0760	5000.83	.	.	.	Q	V.	.	.
20.000	5116.5170	5000.83	.	.	.	Q	V.	.	.

END OF FLOOD ROUTING ANALYSIS

HYDROLOGIC ANALYSIS

AT

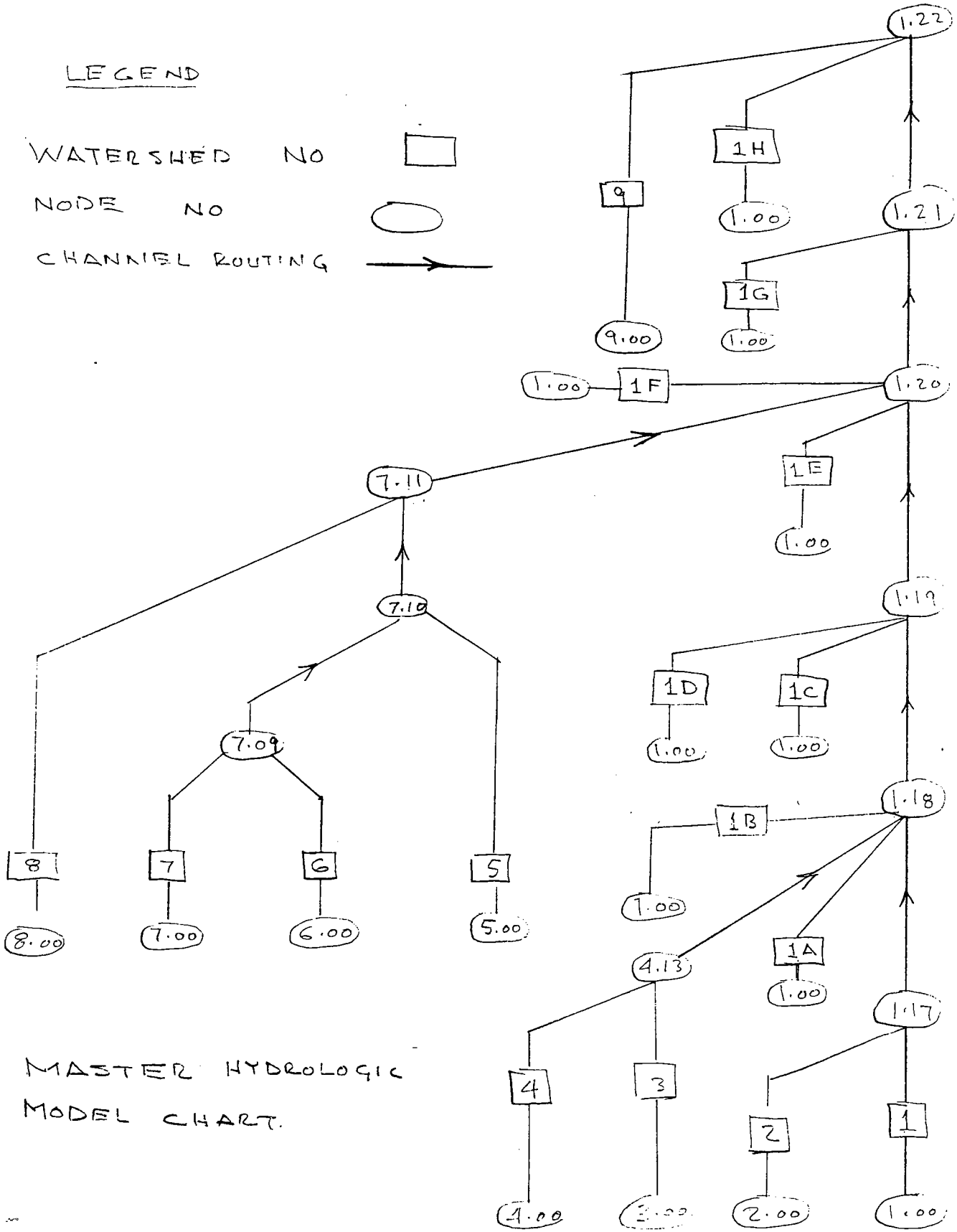
DESIGN NODE 1.18

LEGEND

WATERSHED NO

NODE NO

CHANNEL ROUTING



MASTER HYDROLOGIC MODEL CHART.

PROJECT ADELANTO DATE CHECKED DATE 5/18/92

DETAIL CHECKED BY PAGE NO.

POINT PRECIPITATION IN INCH 100-YR FREQUENCY. 11812

WATERSHED #	24 HR	6 HR	3 HR	1 HR	30 MIN	5 MIN
8	5.47	2.99	2.23	1.41	1.14	0.67
7	4.08	1.99	1.69	1.3	1.05	0.62
6	3.78	1.82	1.57	1.24	1.0	0.58
5	4.33	2.66	2.06	1.37	1.11	0.65
4	4.25	2.12	1.76	1.31	1.06	0.62
3	4.14	2.18	1.78	1.29	1.05	0.61
2	5.27	2.67	2.07	1.38	1.12	0.65
1	5.15	2.57	2.02	1.38	1.12	0.65
9	2.83	1.8	1.52	1.17	0.95	0.55
1A	3.02	1.8	1.53	1.2	0.97	0.57
1B	3.05	1.8	1.54	1.2	0.97	0.57
1C	3.0	1.8	1.54	1.2	0.97	0.57
1D	3.05	1.8	1.54	1.2	0.97	0.57
1E	3.00	1.8	1.54	1.2	0.97	0.57
1F	3.12	1.8	1.54	1.2	0.97	0.57
1G	2.98	1.8	1.54	1.2	0.97	0.57
1H	2.95	1.8	1.54	1.2	0.97	0.57

DESIGN NODE 1.18

$$R118 = \frac{\Sigma A_i R_i}{\Sigma A_i}$$

A1 = 14484 , A2 = 7823 , A3 = 1646 , A4 = 2605

A(1A) = .933 , A(1B) = 295

FOR R_i SEE RAINFALL TABLE

ΣA_i = 27786

R(5MIN)	= 0.64	0.46
R(30MIN)	= 1.10	0.496
R 1 HR.	= 1.36	0.617
R 3 HRS.	= 1.97	0.856
R 6 HRS	= 2.50	0.936
R24 HRS	= 4.95	0.961

AREA DEPTH FACTORS

SEE FILE ADF118.OUT.

118/4

NODE 1.18 AS DESIGN POINT

WATERSHED 1

NODE #	AREA Ac	Fm	$\bar{Y}$	V	L	TT	LAG
105	706	.092	.059				.467
				7.61	9900	.361	
107	940	.123	.103				.828
				7.32	9000	.342	
109	2328	.202	.215				1.170
				8.64	9700	.312	
112	3489	.218	.238				1.482
				7.42	7000	.262	
113	3715	.225	.248				1.744
				9.55	4200	.122	
114	11096	.195	.214				1.866
				11.59	9600	.230	
116	14167	.222	.252				2.096
				11.12	6900	.172	
117	14484	.223	.254				2.262

WATERSHED 2

207	790	.304	.327				.330
				6.83	7700	.313	
209	1529	.332	.369				1.143
				7.96	7100	.248	
211	4048	.242	.264				1.391
				10.45	9800	.260	
213	4510	.248	.274				1.651
				10.26	5800	0.157	
215	5333	.252	.281				1.808
				11.54	8000	0.193	
217	5852	.246	.272				2.000
				11.07	7500	0.188	
117	7823	.255	.287				2.188

RIVERTECH INC

CLIENT _____ JOB NO. _____ COMPUTED BY _____

PROJECT _____ DATE CHECKED _____ DATE _____

DETAIL _____ CHECKED BY _____ PAGE NO. _____

DESIGN NODE 1.18

WATERSHED 3

NODE #	AREA Ac.	F_m	$\bar{Y}$	V	L	TT	LAC
307	685	.253	.284				1.38
				5.73	8100	.393	
310	955	.266	.304				1.773
				5.98	8400	.390	
312	1487	.276	.320				2.167
				5.90	6000	.282	
413	1646	.269	.311				2.44?

WATERSHED 4

4.09	672	.302	.341				1.68
				4.85	3800	.218	
4.10	1615	.267	.300				1.898
				7.21	8400	.324	
4.12	2467	.274	.314				2.222
				6.99	6800	.270	
413	2605	.268	.307				2.492

WATERSHED 1A

1.18	933	.199	.239				0.744

WATERSHED 1B

1.18	295	.140	.183				0.90?

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
       (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
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         Ver. 1.5A  Release Date: 3/05/92  License ID 1263

                        Analysis prepared by:

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               CONSULTANTS IN WATER RESOURCES ENGINEERING
        23332 MILL CREEK DRIVE, SUITE 100, LAGUNA HILLS, CA 92653
       TELEPHONE: (714) 586 - 6121          FAX: (714) 586 - 2217

 ************************** DESCRIPTION OF STUDY **************************
*                          DESIGN NODE 1.18                              *
*        TIME OF CONCENTRATION AT NODE 1.05                              *
*                                                                        *
 **************************************************************************

  FILE NAME: R105-118.INP
  TIME/DATE OF STUDY: 11:16   6/25/1992
==========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3600


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
  NATURAL POOR COVER
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
  UPSTREAM ELEVATION(FEET) =   4620.00
  DOWNSTREAM ELEVATION(FEET) =   4600.00
  ELEVATION DIFFERENCE(FEET) =     20.00
  TC(MIN.) =  .525*[( 1000.00** 3.00)/(    20.00)]** .20 =   18.195
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.135
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =     26.60
  TOTAL AREA(ACRES) =     10.00   PEAK FLOW RATE(CFS) =     26.60


**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   4600.00
  DOWNSTREAM NODE ELEVATION =   4340.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4700.00
  CHANNEL SLOPE =   .0553
  CHANNEL FLOW THRU SUBAREA(CFS) =     26.60
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0553 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   3.93 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  19.95   TC(MIN.) =  38.14


**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.868
  SOIL CLASSIFICATION IS "B"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   24.80     SUBAREA RUNOFF(CFS) =   35.66
  EFFECTIVE AREA(ACRES) =   34.80   AREA-AVERAGED Fm(INCH/HR) =   .24
  AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   34.80       PEAK FLOW RATE(CFS) =   50.85
  TC(MIN) =  38.14


**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.868
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
```

```
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   18.00     SUBAREA RUNOFF(CFS) =   27.34
 EFFECTIVE AREA(ACRES) =   52.80   AREA-AVERAGED Fm(INCH/HR) =   .22
 AREA-AVERAGED Fp(INCH/HR) =   .22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   52.80       PEAK FLOW RATE(CFS) =   78.18
 TC(MIN) =  38.14

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.02 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =  38.14
 RAINFALL INTENSITY(INCH/HR) =   1.87
 AREA-AVERAGED Fm(INCH/HR) =   .22
 AREA-AVERAGED Fp(INCH/HR) =   .22
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =   52.80
 TOTAL STREAM AREA(ACRES) =   52.80
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     78.18

****************************************************************************
 FLOW PROCESS FROM NODE     1.20 TO NODE     1.21 IS CODE = 2.1
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 NATURAL POOR COVER
 TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
 INITIAL SUBAREA FLOW-LENGTH(FEET) =   600.00
 UPSTREAM ELEVATION(FEET) =   4640.00
 DOWNSTREAM ELEVATION(FEET) =   4560.00
 ELEVATION DIFFERENCE(FEET) =     80.00
 TC(MIN.) =  .525*[(  600.00** 3.00)/(    80.00)]** .20 =   10.149
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.718
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA RUNOFF(CFS) =     71.27
 TOTAL AREA(ACRES) =     17.45   PEAK FLOW RATE(CFS) =     71.27

****************************************************************************
 FLOW PROCESS FROM NODE     1.21 TO NODE     1.22 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4560.00
 DOWNSTREAM NODE ELEVATION =   4440.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2900.00
 CHANNEL SLOPE =   .0414
 CHANNEL FLOW THRU SUBAREA(CFS) =     71.27
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0414 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   4.72 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  10.25   TC(MIN.) =  20.40

****************************************************************************
 FLOW PROCESS FROM NODE     1.21 TO NODE     1.22 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.894
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  106.50     SUBAREA RUNOFF(CFS) =  260.16
 EFFECTIVE AREA(ACRES) =  123.95   AREA-AVERAGED Fm(INCH/HR) =   .18
 AREA-AVERAGED Fp(INCH/HR) =   .18  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =  123.95       PEAK FLOW RATE(CFS) =  302.79
 TC(MIN) =  20.40

****************************************************************************
 FLOW PROCESS FROM NODE     1.21 TO NODE     1.22 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.894
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   10.10     SUBAREA RUNOFF(CFS) =   23.85
 EFFECTIVE AREA(ACRES) =  134.05   AREA-AVERAGED Fm(INCH/HR) =   .19
 AREA-AVERAGED Fp(INCH/HR) =   .19  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =  134.05       PEAK FLOW RATE(CFS) =  326.65
 TC(MIN) =  20.40

****************************************************************************
 FLOW PROCESS FROM NODE     1.22 TO NODE     1.02 IS CODE = 5.3
```

```
--------------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
================================================================================
  UPSTREAM NODE ELEVATION =   4440.00
  DOWNSTREAM NODE ELEVATION =   4340.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2300.00
  CHANNEL SLOPE =    .0435
  CHANNEL FLOW THRU SUBAREA(CFS) =    326.65
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0435 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   8.03 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   4.78   TC(MIN.) =  25.17

********************************************************************************
  FLOW PROCESS FROM NODE     1.22 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.498
  SOIL CLASSIFICATION IS "B"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =    .27
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   80.80     SUBAREA RUNOFF(CFS) =  162.02
  EFFECTIVE AREA(ACRES) =   214.85   AREA-AVERAGED Fm(INCH/HR) =   .22
  AREA-AVERAGED Fp(INCH/HR) =   .22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   214.85      PEAK FLOW RATE(CFS) =  440.85
  TC(MIN) =  25.17

********************************************************************************
  FLOW PROCESS FROM NODE     1.22 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.498
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =    .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   28.46     SUBAREA RUNOFF(CFS) =   59.37
  EFFECTIVE AREA(ACRES) =   243.31   AREA-AVERAGED Fm(INCH/HR) =   .21
  AREA-AVERAGED Fp(INCH/HR) =   .21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   243.31      PEAK FLOW RATE(CFS) =  500.22
  TC(MIN) =  25.17

********************************************************************************
  FLOW PROCESS FROM NODE     1.02 TO NODE     1.02 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =  25.17
  RAINFALL INTENSITY(INCH/HR) =   2.50
  AREA-AVERAGED Fm(INCH/HR) =   .21
  AREA-AVERAGED Fp(INCH/HR) =   .21
  AREA-AVERAGED Ap =  1.00
  EFFECTIVE STREAM AREA(ACRES) =  243.31
  TOTAL STREAM AREA(ACRES) =  243.31
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    500.22

********************************************************************************
  FLOW PROCESS FROM NODE     1.30 TO NODE     1.31 IS CODE = 2.1
--------------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
================================================================================
  NATURAL POOR COVER
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   600.00
  UPSTREAM ELEVATION(FEET) =   4600.00
  DOWNSTREAM ELEVATION(FEET) =   4560.00
  ELEVATION DIFFERENCE(FEET) =     40.00
  TC(MIN.) =  .525*[(  600.00** 3.00)/(    40.00)]** .20 =   11.658
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.282
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =    .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =     36.91
  TOTAL AREA(ACRES) =     10.00   PEAK FLOW RATE(CFS) =     36.91

********************************************************************************
  FLOW PROCESS FROM NODE     1.31 TO NODE     1.32 IS CODE = 5.3
--------------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
================================================================================
  UPSTREAM NODE ELEVATION =   4560.00
  DOWNSTREAM NODE ELEVATION =   4440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2600.00
  CHANNEL SLOPE =    .0462
  CHANNEL FLOW THRU SUBAREA(CFS) =     36.91
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0462 (PER LACFCD HYDROLOGY MANUAL)
```

```
 FLOW VELOCITY(FEET/SEC) =   4.00 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  10.83   TC(MIN.) =  22.49

****************************************************************************
 FLOW PROCESS FROM NODE     1.31 TO NODE     1.32 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.703
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   37.64      SUBAREA RUNOFF(CFS) =   82.42
 EFFECTIVE AREA(ACRES) =   47.64   AREA-AVERAGED Fm(INCH/HR) =   .25
 AREA-AVERAGED Fp(INCH/HR) =   .25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   47.64       PEAK FLOW RATE(CFS) =  105.13
 TC(MIN) =  22.49

****************************************************************************
 FLOW PROCESS FROM NODE     1.31 TO NODE     1.32 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.703
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    9.18      SUBAREA RUNOFF(CFS) =   20.85
 EFFECTIVE AREA(ACRES) =   56.82   AREA-AVERAGED Fm(INCH/HR) =   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   56.82       PEAK FLOW RATE(CFS) =  125.98
 TC(MIN) =  22.49

****************************************************************************
 FLOW PROCESS FROM NODE     1.32 TO NODE     1.02 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4440.00
 DOWNSTREAM NODE ELEVATION =   4340.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3150.00
 CHANNEL SLOPE =   .0317
 CHANNEL FLOW THRU SUBAREA(CFS) =   125.98
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0317 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   4.99 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  10.51   TC(MIN.) =  33.00

****************************************************************************
 FLOW PROCESS FROM NODE     1.32 TO NODE     1.02 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.067
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   57.85      SUBAREA RUNOFF(CFS) =   93.54
 EFFECTIVE AREA(ACRES) =  114.67   AREA-AVERAGED Fm(INCH/HR) =   .25
 AREA-AVERAGED Fp(INCH/HR) =   .25  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =  114.67       PEAK FLOW RATE(CFS) =  186.97
 TC(MIN) =  33.00

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.02 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  3
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
 TIME OF CONCENTRATION(MIN.) =  33.00
 RAINFALL INTENSITY(INCH/HR) =   2.07
 AREA-AVERAGED Fm(INCH/HR) =   .25
 AREA-AVERAGED Fp(INCH/HR) =   .25
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =  114.67
 TOTAL STREAM AREA(ACRES) =  114.67
 PEAK FLOW RATE(CFS) AT CONFLUENCE =   186.97

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  3 STREAMS.

 ** PEAK FLOW RATE TABLE **
      Q        Tc      Intensity     Fp        Ap       Fm          Ae
    (CFS)    (MIN.)   (INCH/HR)  (INCH/HR)          (INCH/HR)   (ACRES)
1   748.17    25.17      2.498       .22    1.00        .22       365.63
2   606.79    28.14      1.868       .23    1.00        .23       410.78
3   668.58    33.00      2.067       .23    1.00        .23       403.67

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
```

```
 PEAK FLOW RATE(CFS) =    748.17   Tc(MIN.) =   25.174
 EFFECTIVE AREA(ACRES) =    365.63  AREA-AVERAGED Fm(INCH/HR) =   .22
 AREA-AVERAGED Fp(INCH/HR) =   .22  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    410.78

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4340.00
 DOWNSTREAM NODE ELEVATION =   4300.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =   600.00
 CHANNEL SLOPE =   .0667
 CHANNEL FLOW THRU SUBAREA(CFS) =    748.17
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0667 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =  13.10 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =    .76   TC(MIN.) =  25.94

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.446
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   76.20      SUBAREA RUNOFF(CFS) =  149.25
 EFFECTIVE AREA(ACRES) =   441.83   AREA-AVERAGED Fm(INCH/HR) =   .23
 AREA-AVERAGED Fp(INCH/HR) =   .23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   486.98       PEAK FLOW RATE(CFS) =  880.40
 TC(MIN) =  25.94

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.446
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   15.60      SUBAREA RUNOFF(CFS) =   31.82
 EFFECTIVE AREA(ACRES) =   457.43   AREA-AVERAGED Fm(INCH/HR) =   .23
 AREA-AVERAGED Fp(INCH/HR) =   .23  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   502.58       PEAK FLOW RATE(CFS) =  912.22
 TC(MIN) =  25.94

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.04 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4300.00
 DOWNSTREAM NODE ELEVATION =   4220.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2700.00
 CHANNEL SLOPE =   .0296
 CHANNEL FLOW THRU SUBAREA(CFS) =    912.22
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0296 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   9.33 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   4.82   TC(MIN.) =  30.76

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.171
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  118.45      SUBAREA RUNOFF(CFS) =  202.64
 EFFECTIVE AREA(ACRES) =   575.88   AREA-AVERAGED Fm(INCH/HR) =   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   621.03       PEAK FLOW RATE(CFS) = 1001.51
 TC(MIN) =  30.76

****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.05 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4220.00
 DOWNSTREAM NODE ELEVATION =   4120.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2750.00
```

```
 CHANNEL SLOPE =   .0364
 CHANNEL FLOW THRU SUBAREA(CFS) =   1001.51
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0364 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =  10.66 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   4.30   TC(MIN.) =  35.06


****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.981
 SOIL CLASSIFICATION IS "B"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .2700
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .27
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   85.39     SUBAREA RUNOFF(CFS) =  131.49
 EFFECTIVE AREA(ACRES) =   661.27   AREA-AVERAGED Fm(INCH/HR) =   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   706.42       PEAK FLOW RATE(CFS) = 1034.52
 TC(MIN) =  35.06
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)      =    706.42  TC(MIN.) =     35.06
 EFFECTIVE AREA(ACRES) =    661.27  AREA-AVERAGED Fm(INCH/HR)=   .24
 AREA-AVERAGED Fp(INCH/HR) =   .24  AREA-AVERAGED Ap =  1.00
 PEAK FLOW RATE(CFS)    =  1034.52

 ** PEAK FLOW RATE TABLE **
        Q       Tc     Intensity     Fp       Ap       Fm          Ae
     (CFS)   (MIN.)   (INCH/HR)  (INCH/HR)          (INCH/HR)   (ACRES)
1   1034.52    35.06      1.981       .24   1.00        .24      661.27
2    922.61    43.31      1.709       .24   1.00        .24      699.31
3    845.29    48.78      1.572       .24   1.00        .24      706.42
============================================================================
============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

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

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 ************************** DESCRIPTION OF STUDY **************************
*                          DESIGN NODE 1.18                              *
*          TIME OF CONCENTRATION AT NODE 2.07 , WATERSHED 2              *
*                                                                        *
 **************************************************************************

  FILE NAME: R207-118.INP
  TIME/DATE OF STUDY: 12:53   6/25/1992
==========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3600


**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
  NATURAL POOR COVER
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
  UPSTREAM ELEVATION(FEET) =   4640.00
  DOWNSTREAM ELEVATION(FEET) =   4580.00
  ELEVATION DIFFERENCE(FEET) =     60.00
  TC(MIN.) =  .525*[( 1000.00** 3.00)/(    60.00)]** .20 =   14.606
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.657
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA RUNOFF(CFS) =     16.27
  TOTAL AREA(ACRES) =      5.20   PEAK FLOW RATE(CFS) =     16.27


**************************************************************************
  FLOW PROCESS FROM NODE     2.01 TO NODE     2.02 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   4580.00
  DOWNSTREAM NODE ELEVATION =   4440.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  1500.00
  CHANNEL SLOPE =   .0933
  CHANNEL FLOW THRU SUBAREA(CFS) =     16.27
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0933 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   4.33 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   5.77   TC(MIN.) =  20.38


**************************************************************************
  FLOW PROCESS FROM NODE     2.01 TO NODE     2.02 IS CODE =   8
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.896
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   34.00     SUBAREA RUNOFF(CFS) =   83.12
  EFFECTIVE AREA(ACRES) =   39.20   AREA-AVERAGED Fm(INCH/HR) =   .18
  AREA-AVERAGED Fp(INCH/HR) =   .18  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   39.20       PEAK FLOW RATE(CFS) =   95.83
  TC(MIN) =  20.38


**************************************************************************
  FLOW PROCESS FROM NODE     2.02 TO NODE     2.03 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   4440.00
  DOWNSTREAM NODE ELEVATION =   4340.00
```

```
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2100.00
  CHANNEL SLOPE =    .0476
  CHANNEL FLOW THRU SUBAREA(CFS) =     95.83
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0476 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   5.58 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   6.27   TC(MIN.) =  26.65

****************************************************************************
  FLOW PROCESS FROM NODE     2.02 TO NODE     2.03 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.400
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =    .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   27.50     SUBAREA RUNOFF(CFS) =   54.96
  EFFECTIVE AREA(ACRES) =    66.70   AREA-AVERAGED Fm(INCH/HR) =   .18
  AREA-AVERAGED Fp(INCH/HR) =   .18  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    66.70       PEAK FLOW RATE(CFS) =  133.30
  TC(MIN) =  26.65

****************************************************************************
  FLOW PROCESS FROM NODE     2.02 TO NODE     2.03 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.400
  SOIL CLASSIFICATION IS "A"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =    .41
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   12.90     SUBAREA RUNOFF(CFS) =   23.11
  EFFECTIVE AREA(ACRES) =    79.60   AREA-AVERAGED Fm(INCH/HR) =   .22
  AREA-AVERAGED Fp(INCH/HR) =   .22  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    79.60       PEAK FLOW RATE(CFS) =  156.40
  TC(MIN) =  26.65

****************************************************************************
  FLOW PROCESS FROM NODE     2.03 TO NODE     2.04 IS CODE = 5.3
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION =   4340.00
  DOWNSTREAM NODE ELEVATION =   4240.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3200.00
  CHANNEL SLOPE =    .0313
  CHANNEL FLOW THRU SUBAREA(CFS) =    156.40
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0313 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   5.32 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  10.02   TC(MIN.) =  36.66

****************************************************************************
  FLOW PROCESS FROM NODE     2.03 TO NODE     2.04 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.920
  SOIL CLASSIFICATION IS "C"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =    .18
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =    6.00     SUBAREA RUNOFF(CFS) =    9.40
  EFFECTIVE AREA(ACRES) =    85.60   AREA-AVERAGED Fm(INCH/HR) =   .21
  AREA-AVERAGED Fp(INCH/HR) =   .21  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =    85.60       PEAK FLOW RATE(CFS) =  156.40
  TC(MIN) =  36.66

****************************************************************************
  FLOW PROCESS FROM NODE     2.03 TO NODE     2.04 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.920
  SOIL CLASSIFICATION IS "A"
  NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =    .41
  SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
  SUBAREA AREA(ACRES) =   40.80     SUBAREA RUNOFF(CFS) =   55.45
  EFFECTIVE AREA(ACRES) =   126.40   AREA-AVERAGED Fm(INCH/HR) =   .28
  AREA-AVERAGED Fp(INCH/HR) =   .28  AREA-AVERAGED Ap =  1.00
  TOTAL AREA(ACRES) =   126.40       PEAK FLOW RATE(CFS) =  186.82
  TC(MIN) =  36.66

****************************************************************************
  FLOW PROCESS FROM NODE     2.04 TO NODE     2.04 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.) =  36.66
 RAINFALL INTENSITY(INCH/HR) =   1.92
 AREA-AVERAGED Fm(INCH/HR) =   .28
 AREA-AVERAGED Fp(INCH/HR) =   .28
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =  126.40
 TOTAL STREAM AREA(ACRES) =  126.40
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    186.82

****************************************************************************
 FLOW PROCESS FROM NODE     2.20 TO NODE     2.21 IS CODE = 2.1
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
 NATURAL POOR COVER
 TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
 INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
 UPSTREAM ELEVATION(FEET) =   4540.00
 DOWNSTREAM ELEVATION(FEET) =   4480.00
 ELEVATION DIFFERENCE(FEET) =     60.00
 TC(MIN.) =  .525*[( 1000.00** 3.00)/(    60.00)]** .20 =   14.606
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.657
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA RUNOFF(CFS) =     13.45
 TOTAL AREA(ACRES) =      4.30   PEAK FLOW RATE(CFS) =     13.45

****************************************************************************
 FLOW PROCESS FROM NODE     2.21 TO NODE     2.22 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4480.00
 DOWNSTREAM NODE ELEVATION =   4340.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2000.00
 CHANNEL SLOPE =   .0700
 CHANNEL FLOW THRU SUBAREA(CFS) =     13.45
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0700 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   3.52 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   9.47   TC(MIN.) =  24.07

****************************************************************************
 FLOW PROCESS FROM NODE     2.21 TO NODE     2.22 IS CODE =  8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.577
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   44.80     SUBAREA RUNOFF(CFS) =   87.39
 EFFECTIVE AREA(ACRES) =   49.10   AREA-AVERAGED Fm(INCH/HR) =   .39
 AREA-AVERAGED Fp(INCH/HR) =   .39  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    49.10      PEAK FLOW RATE(CFS) =   96.66
 TC(MIN) =  24.07

****************************************************************************
 FLOW PROCESS FROM NODE     2.21 TO NODE     2.22 IS CODE =  8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.577
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    2.00     SUBAREA RUNOFF(CFS) =    4.32
 EFFECTIVE AREA(ACRES) =   51.10   AREA-AVERAGED Fm(INCH/HR) =   .38
 AREA-AVERAGED Fp(INCH/HR) =   .38  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    51.10      PEAK FLOW RATE(CFS) =  100.98
 TC(MIN) =  24.07

****************************************************************************
 FLOW PROCESS FROM NODE     2.22 TO NODE     2.04 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4340.00
 DOWNSTREAM NODE ELEVATION =   4240.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3200.00
 CHANNEL SLOPE =   .0313
 CHANNEL FLOW THRU SUBAREA(CFS) =    100.98
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0313 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   4.60 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  11.59   TC(MIN.) =  35.66
```

```
****************************************************************************
 FLOW PROCESS FROM NODE     2.22 TO NODE     2.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.958
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   69.80     SUBAREA RUNOFF(CFS) =   97.22
 EFFECTIVE AREA(ACRES) =   120.90   AREA-AVERAGED Fm(INCH/HR) =   .40
 AREA-AVERAGED Fp(INCH/HR) =   .40  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   120.90       PEAK FLOW RATE(CFS) =  169.69
 TC(MIN) =  35.66


****************************************************************************
 FLOW PROCESS FROM NODE     2.04 TO NODE     2.04 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =  35.66
 RAINFALL INTENSITY(INCH/HR) =   1.96
 AREA-AVERAGED Fm(INCH/HR) =   .40
 AREA-AVERAGED Fp(INCH/HR) =   .40
 AREA-AVERAGED Ap =  1.00
 EFFECTIVE STREAM AREA(ACRES) =  120.90
 TOTAL STREAM AREA(ACRES) =  120.90
 PEAK FLOW RATE(CFS) AT CONFLUENCE =    169.69

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

 ** PEAK FLOW RATE TABLE **
        Q       Tc     Intensity     Fp       Ap       Fm          Ae
      (CFS)   (MIN.)   (INCH/HR)  (INCH/HR)          (INCH/HR)   (ACRES)
1    352.42    36.66      1.920       .34   1.00        .34       247.30
2    355.57    35.66      1.958       .34   1.00        .34       243.85

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =    355.57   Tc(MIN.) =   35.660
 EFFECTIVE AREA(ACRES) =    243.85  AREA-AVERAGED Fm(INCH/HR) =   .34
 AREA-AVERAGED Fp(INCH/HR) =   .34  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =    247.30


****************************************************************************
 FLOW PROCESS FROM NODE     2.04 TO NODE     2.05 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   4240.00
 DOWNSTREAM NODE ELEVATION =   4120.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  4200.00
 CHANNEL SLOPE =   .0286
 CHANNEL FLOW THRU SUBAREA(CFS) =    355.57
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0286 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   6.69 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  10.46   TC(MIN.) =  46.12


****************************************************************************
 FLOW PROCESS FROM NODE     2.04 TO NODE     2.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.635
 SOIL CLASSIFICATION IS "A"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .4100
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .41
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =  156.10     SUBAREA RUNOFF(CFS) =  172.10
 EFFECTIVE AREA(ACRES) =   399.95   AREA-AVERAGED Fm(INCH/HR) =   .37
 AREA-AVERAGED Fp(INCH/HR) =   .37  AREA-AVERAGED Ap =  1.00
 TOTAL AREA(ACRES) =   403.40       PEAK FLOW RATE(CFS) =  456.89
 TC(MIN) =  46.12


****************************************************************************
 FLOW PROCESS FROM NODE     2.04 TO NODE     2.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.635
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   27.60     SUBAREA RUNOFF(CFS) =   21.34
 EFFECTIVE AREA(ACRES) =   427.55   AREA-AVERAGED Fm(INCH/HR) =   .39
 AREA-AVERAGED Fp(INCH/HR) =   .40  AREA-AVERAGED Ap =   .99
 TOTAL AREA(ACRES) =   431.00       PEAK FLOW RATE(CFS) =  478.23
 TC(MIN) =  46.12
```

```
****************************************************************************
 FLOW PROCESS FROM NODE     2.04 TO NODE     2.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.635
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   32.10     SUBAREA RUNOFF(CFS) =   42.04
 EFFECTIVE AREA(ACRES) =  459.65   AREA-AVERAGED Fm(INCH/HR) =   .38
 AREA-AVERAGED Fp(INCH/HR) =   .38  AREA-AVERAGED Ap =   .99
 TOTAL AREA(ACRES) =  463.10       PEAK FLOW RATE(CFS) =  520.27
 TC(MIN) =  46.12

****************************************************************************
 FLOW PROCESS FROM NODE     2.05 TO NODE     2.06 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =  4120.00
 DOWNSTREAM NODE ELEVATION =  4080.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  1700.00
 CHANNEL SLOPE =  .0235
 CHANNEL FLOW THRU SUBAREA(CFS) =   520.27
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0235 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =  6.89 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  4.11   TC(MIN.) =  50.23

****************************************************************************
 FLOW PROCESS FROM NODE     2.05 TO NODE     2.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.540
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =   49.50     SUBAREA RUNOFF(CFS) =   60.60
 EFFECTIVE AREA(ACRES) =  509.15   AREA-AVERAGED Fm(INCH/HR) =   .36
 AREA-AVERAGED Fp(INCH/HR) =   .36  AREA-AVERAGED Ap =   .99
 TOTAL AREA(ACRES) =  512.60       PEAK FLOW RATE(CFS) =  541.63
 TC(MIN) =  50.23

****************************************************************************
 FLOW PROCESS FROM NODE     2.05 TO NODE     2.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.540
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =  .80
 SUBAREA AREA(ACRES) =   89.10     SUBAREA RUNOFF(CFS) =   61.28
 EFFECTIVE AREA(ACRES) =  598.25   AREA-AVERAGED Fm(INCH/HR) =   .42
 AREA-AVERAGED Fp(INCH/HR) =   .44  AREA-AVERAGED Ap =   .96
 TOTAL AREA(ACRES) =  601.70       PEAK FLOW RATE(CFS) =  602.91
 TC(MIN) =  50.23

****************************************************************************
 FLOW PROCESS FROM NODE     2.05 TO NODE     2.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.540
 SOIL CLASSIFICATION IS "C"
 NATURAL POOR COVER "BARREN" SUBAREA LOSS RATE, Fm(INCH/HR) =  .1800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .18
 SUBAREA PERVIOUS AREA FRACTION, Ap =  1.00
 SUBAREA AREA(ACRES) =    4.20     SUBAREA RUNOFF(CFS) =    5.14
 EFFECTIVE AREA(ACRES) =  602.45   AREA-AVERAGED Fm(INCH/HR) =   .42
 AREA-AVERAGED Fp(INCH/HR) =   .44  AREA-AVERAGED Ap =   .96
 TOTAL AREA(ACRES) =  605.90       PEAK FLOW RATE(CFS) =  608.06
 TC(MIN) =  50.23

****************************************************************************
 FLOW PROCESS FROM NODE     2.06 TO NODE     2.07 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =  4080.00
 DOWNSTREAM NODE ELEVATION =  3930.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  5600.00
 CHANNEL SLOPE =  .0268
 CHANNEL FLOW THRU SUBAREA(CFS) =   608.06
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0268 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =  7.75 (PER LACFCD HYDROLOGY MANUAL)
```

```
 TRAVEL TIME(MIN.) =  12.05   TC(MIN.) =  62.28

****************************************************************************
 FLOW PROCESS FROM NODE     2.06 TO NODE     2.07 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.325
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =  150.60      SUBAREA RUNOFF(CFS) =   74.42
 EFFECTIVE AREA(ACRES) =   753.05   AREA-AVERAGED Fm(INCH/HR) =   .49
 AREA-AVERAGED Fp(INCH/HR) =   .53  AREA-AVERAGED Ap =   .93
 TOTAL AREA(ACRES) =   756.50       PEAK FLOW RATE(CFS) =  608.06
 TC(MIN) =  62.28


****************************************************************************
 FLOW PROCESS FROM NODE     2.06 TO NODE     2.07 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.325
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   33.00      SUBAREA RUNOFF(CFS) =   26.05
 EFFECTIVE AREA(ACRES) =   786.05   AREA-AVERAGED Fm(INCH/HR) =   .49
 AREA-AVERAGED Fp(INCH/HR) =   .53  AREA-AVERAGED Ap =   .92
 TOTAL AREA(ACRES) =   789.50       PEAK FLOW RATE(CFS) =  608.06
 TC(MIN) =  62.28
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)     =    789.50  TC(MIN.) =     62.28
 EFFECTIVE AREA(ACRES) =    786.05  AREA-AVERAGED Fm(INCH/HR)=   .49
 AREA-AVERAGED Fp(INCH/HR) =   .53  AREA-AVERAGED Ap =   .92
 PEAK FLOW RATE(CFS)   =    608.06

 ** PEAK FLOW RATE TABLE **
        Q       Tc     Intensity     Fp       Ap       Fm          Ae
     (CFS)   (MIN.)   (INCH/HR)  (INCH/HR)          (INCH/HR)   (ACRES)
1    608.06    62.28      1.325       .53     .92        .49      786.05
2    599.91    63.38      1.309       .53     .92        .49      789.50
============================================================================
============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

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

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 ************************* DESCRIPTION OF STUDY *************************
*                           DESIGN NODE 1.18                             *
*               TIME OF CONCENTRATION AT NODE 3.07                       *
*                                                                        *
 **************************************************************************

  FILE NAME: R307-118.INP
  TIME/DATE OF STUDY: 11:22   6/25/1992
==========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3600


**************************************************************************
  FLOW PROCESS FROM NODE     3.00 TO NODE     3.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
  DEVELOPMENT IS  SINGLE FAMILY RESIDENTIAL -> 1 DWELLING/ACRE
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
  UPSTREAM ELEVATION(FEET) =   4000.00
  DOWNSTREAM ELEVATION(FEET) =   3960.00
  ELEVATION DIFFERENCE(FEET) =     40.00
  TC(MIN.) =  .469*[( 1000.00** 3.00)/(    40.00)]** .20 =   14.150
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.739
  SOIL CLASSIFICATION IS "A"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA RUNOFF(CFS) =      8.27
  TOTAL AREA(ACRES) =      3.10   PEAK FLOW RATE(CFS) =      8.27


**************************************************************************
  FLOW PROCESS FROM NODE     3.01 TO NODE     3.02 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   3960.00
  DOWNSTREAM NODE ELEVATION =   3900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2400.00
  CHANNEL SLOPE =   .0250
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.27
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0250 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   1.79 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  22.36   TC(MIN.) =  36.51


**************************************************************************
  FLOW PROCESS FROM NODE     3.01 TO NODE     3.02 IS CODE =   8
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.926
  SOIL CLASSIFICATION IS "A"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA AREA(ACRES) =   16.80     SUBAREA RUNOFF(CFS) =   17.38
  EFFECTIVE AREA(ACRES) =   19.90   AREA-AVERAGED Fm(INCH/HR) =   .78
  AREA-AVERAGED Fp(INCH/HR) =   .97  AREA-AVERAGED Ap =   .80
  TOTAL AREA(ACRES) =   19.90       PEAK FLOW RATE(CFS) =   20.59
  TC(MIN) =  36.51


**************************************************************************
  FLOW PROCESS FROM NODE     3.02 TO NODE     3.03 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   3900.00
  DOWNSTREAM NODE ELEVATION =   3820.00
```

```
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2800.00
 CHANNEL SLOPE =   .0286
 CHANNEL FLOW THRU SUBAREA(CFS) =     20.59
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0286 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   2.59 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  18.01   TC(MIN.) =  54.51

****************************************************************************
 FLOW PROCESS FROM NODE     3.02 TO NODE     3.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.454
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   62.40     SUBAREA RUNOFF(CFS) =   38.10
 EFFECTIVE AREA(ACRES) =   82.30   AREA-AVERAGED Fm(INCH/HR) =   .78
 AREA-AVERAGED Fp(INCH/HR) =   .97  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   82.30       PEAK FLOW RATE(CFS) =   50.25
 TC(MIN) =  54.51

****************************************************************************
 FLOW PROCESS FROM NODE     3.02 TO NODE     3.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.454
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =    4.90     SUBAREA RUNOFF(CFS) =    4.44
 EFFECTIVE AREA(ACRES) =   87.20   AREA-AVERAGED Fm(INCH/HR) =   .76
 AREA-AVERAGED Fp(INCH/HR) =   .95  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   87.20       PEAK FLOW RATE(CFS) =   54.69
 TC(MIN) =  54.51

****************************************************************************
 FLOW PROCESS FROM NODE     3.03 TO NODE     3.04 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3820.00
 DOWNSTREAM NODE ELEVATION =   3745.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3400.00
 CHANNEL SLOPE =   .0221
 CHANNEL FLOW THRU SUBAREA(CFS) =     54.69
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0221 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   3.15 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  17.97   TC(MIN.) =  72.49

****************************************************************************
 FLOW PROCESS FROM NODE     3.03 TO NODE     3.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.191
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   75.30     SUBAREA RUNOFF(CFS) =   50.38
 EFFECTIVE AREA(ACRES) =  162.50   AREA-AVERAGED Fm(INCH/HR) =   .61
 AREA-AVERAGED Fp(INCH/HR) =   .77  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =  162.50       PEAK FLOW RATE(CFS) =   84.43
 TC(MIN) =  72.49

****************************************************************************
 FLOW PROCESS FROM NODE     3.03 TO NODE     3.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.191
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   12.50     SUBAREA RUNOFF(CFS) =    4.67
 EFFECTIVE AREA(ACRES) =  175.00   AREA-AVERAGED Fm(INCH/HR) =   .63
 AREA-AVERAGED Fp(INCH/HR) =   .78  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =  175.00       PEAK FLOW RATE(CFS) =   89.10
 TC(MIN) =  72.49

****************************************************************************
 FLOW PROCESS FROM NODE     3.03 TO NODE     3.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.191
```

```
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .6000
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =    2.80     SUBAREA RUNOFF(CFS) =    1.49
 EFFECTIVE AREA(ACRES) =   177.80   AREA-AVERAGED Fm(INCH/HR) =   .63
 AREA-AVERAGED Fp(INCH/HR) =   .78  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   177.80       PEAK FLOW RATE(CFS) =   90.59
 TC(MIN) =  72.49

****************************************************************************
 FLOW PROCESS FROM NODE     3.04 TO NODE     3.05 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3745.00
 DOWNSTREAM NODE ELEVATION =   3600.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3400.00
 CHANNEL SLOPE =   .0426
 CHANNEL FLOW THRU SUBAREA(CFS) =     90.59
 FLOW VELOCITY(FEET/SEC) =   9.52 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   5.95   TC(MIN.) =  78.44

****************************************************************************
 FLOW PROCESS FROM NODE     3.04 TO NODE     3.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.127
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .6000
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =    5.00     SUBAREA RUNOFF(CFS) =    2.37
 EFFECTIVE AREA(ACRES) =   182.80   AREA-AVERAGED Fm(INCH/HR) =   .62
 AREA-AVERAGED Fp(INCH/HR) =   .78  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   182.80       PEAK FLOW RATE(CFS) =   90.59
 TC(MIN) =  78.44

****************************************************************************
 FLOW PROCESS FROM NODE     3.04 TO NODE     3.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.127
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   73.00     SUBAREA RUNOFF(CFS) =   44.63
 EFFECTIVE AREA(ACRES) =   255.80   AREA-AVERAGED Fm(INCH/HR) =   .57
 AREA-AVERAGED Fp(INCH/HR) =   .72  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   255.80       PEAK FLOW RATE(CFS) =  127.35
 TC(MIN) =  78.44

****************************************************************************
 FLOW PROCESS FROM NODE     3.05 TO NODE     3.06 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3600.00
 DOWNSTREAM NODE ELEVATION =   3580.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3600.00
 CHANNEL SLOPE =   .0056
 CHANNEL FLOW THRU SUBAREA(CFS) =    127.35
 FLOW VELOCITY(FEET/SEC) =   3.81 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  15.77   TC(MIN.) =  94.21

****************************************************************************
 FLOW PROCESS FROM NODE     3.05 TO NODE     3.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .992
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .6000
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   43.10     SUBAREA RUNOFF(CFS) =   15.19
 EFFECTIVE AREA(ACRES) =   298.90   AREA-AVERAGED Fm(INCH/HR) =   .58
 AREA-AVERAGED Fp(INCH/HR) =   .72  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   298.90       PEAK FLOW RATE(CFS) =  127.35
 TC(MIN) =  94.21

****************************************************************************
 FLOW PROCESS FROM NODE     3.05 TO NODE     3.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .992
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
```

```
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA AREA(ACRES) =   73.50     SUBAREA RUNOFF(CFS) =   35.97
  EFFECTIVE AREA(ACRES) =   372.40   AREA-AVERAGED Fm(INCH/HR) =   .55
  AREA-AVERAGED Fp(INCH/HR) =   .69  AREA-AVERAGED Ap =   .80
  TOTAL AREA(ACRES) =   372.40      PEAK FLOW RATE(CFS) =  147.28
  TC(MIN) =  94.21

****************************************************************************
  FLOW PROCESS FROM NODE     3.06 TO NODE     3.07 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION =   3580.00
  DOWNSTREAM NODE ELEVATION =   3470.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4600.00
  CHANNEL SLOPE =   .0239
  CHANNEL FLOW THRU SUBAREA(CFS) =    147.28
  FLOW VELOCITY(FEET/SEC) =   8.25 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   9.29   TC(MIN.) = 103.50

****************************************************************************
  FLOW PROCESS FROM NODE     3.06 TO NODE     3.07 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =   .929
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA AREA(ACRES) =  312.20     SUBAREA RUNOFF(CFS) =  135.02
  EFFECTIVE AREA(ACRES) =   684.60   AREA-AVERAGED Fm(INCH/HR) =   .50
  AREA-AVERAGED Fp(INCH/HR) =   .63  AREA-AVERAGED Ap =   .80
  TOTAL AREA(ACRES) =   684.60      PEAK FLOW RATE(CFS) =  261.13
  TC(MIN) = 103.50
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)      =    684.60  TC(MIN.) =    103.50
  EFFECTIVE AREA(ACRES) =    684.60  AREA-AVERAGED Fm(INCH/HR)=   .50
  AREA-AVERAGED Fp(INCH/HR) =   .63  AREA-AVERAGED Ap =   .80
  PEAK FLOW RATE(CFS)    =    261.13
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

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

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 ************************* DESCRIPTION OF STUDY *************************
*                           DESIGN NODE 1.18                             *
*                TIME OF CONCENTRATION AT NODE 4.09                      *
*                                                                        *
 **************************************************************************

  FILE NAME: R409-118.INP
  TIME/DATE OF STUDY: 11:26   6/25/1992
==========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3600


**************************************************************************
  FLOW PROCESS FROM NODE     4.00 TO NODE     4.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
  DEVELOPMENT IS  SINGLE FAMILY RESIDENTIAL -> 1 DWELLING/ACRE
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   700.00
  UPSTREAM ELEVATION(FEET) =   4055.00
  DOWNSTREAM ELEVATION(FEET) =   4030.00
  ELEVATION DIFFERENCE(FEET) =     25.00
  TC(MIN.) =  .469*[(  700.00** 3.00)/(    25.00)]** .20 =   12.550
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  4.066
  SOIL CLASSIFICATION IS "A"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA RUNOFF(CFS) =      8.88
  TOTAL AREA(ACRES) =      3.00   PEAK FLOW RATE(CFS) =      8.88


**************************************************************************
  FLOW PROCESS FROM NODE     4.01 TO NODE     4.02 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   4030.00
  DOWNSTREAM NODE ELEVATION =   3950.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2700.00
  CHANNEL SLOPE =   .0296
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.88
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0296 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   1.99 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  22.56   TC(MIN.) =  35.11


**************************************************************************
  FLOW PROCESS FROM NODE     4.01 TO NODE     4.02 IS CODE =   8
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.979
  SOIL CLASSIFICATION IS "A"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA AREA(ACRES) =   24.80     SUBAREA RUNOFF(CFS) =   26.85
  EFFECTIVE AREA(ACRES) =   27.80   AREA-AVERAGED Fm(INCH/HR) =   .78
  AREA-AVERAGED Fp(INCH/HR) =   .97  AREA-AVERAGED Ap =   .80
  TOTAL AREA(ACRES) =   27.80       PEAK FLOW RATE(CFS) =   30.10
  TC(MIN) =  35.11


**************************************************************************
  FLOW PROCESS FROM NODE     4.02 TO NODE     4.03 IS CODE = 5.3
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   3950.00
  DOWNSTREAM NODE ELEVATION =   3880.00
```

```
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2600.00
 CHANNEL SLOPE =   .0269
 CHANNEL FLOW THRU SUBAREA(CFS) =     30.10
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0269 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   2.86 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  15.18   TC(MIN.) =  50.28

****************************************************************************
 FLOW PROCESS FROM NODE     4.02 TO NODE     4.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.539
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   53.00      SUBAREA RUNOFF(CFS) =   36.40
 EFFECTIVE AREA(ACRES) =   80.80   AREA-AVERAGED Fm(INCH/HR) =   .78
 AREA-AVERAGED Fp(INCH/HR) =   .97  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   80.80        PEAK FLOW RATE(CFS) =   55.49
 TC(MIN) =  50.28

****************************************************************************
 FLOW PROCESS FROM NODE     4.03 TO NODE     4.04 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3880.00
 DOWNSTREAM NODE ELEVATION =   3820.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3000.00
 CHANNEL SLOPE =   .0200
 CHANNEL FLOW THRU SUBAREA(CFS) =     55.49
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0200 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   3.02 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  16.58   TC(MIN.) =  66.86

****************************************************************************
 FLOW PROCESS FROM NODE     4.03 TO NODE     4.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.261
 SOIL CLASSIFICATION IS "A"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   35.80      SUBAREA RUNOFF(CFS) =   15.62
 EFFECTIVE AREA(ACRES) =   116.60   AREA-AVERAGED Fm(INCH/HR) =   .78
 AREA-AVERAGED Fp(INCH/HR) =   .97  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   116.60       PEAK FLOW RATE(CFS) =   55.49
 TC(MIN) =  66.86

****************************************************************************
 FLOW PROCESS FROM NODE     4.03 TO NODE     4.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.261
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   21.10      SUBAREA RUNOFF(CFS) =   15.43
 EFFECTIVE AREA(ACRES) =   137.70   AREA-AVERAGED Fm(INCH/HR) =   .73
 AREA-AVERAGED Fp(INCH/HR) =   .91  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =   137.70       PEAK FLOW RATE(CFS) =   66.30
 TC(MIN) =  66.86

****************************************************************************
 FLOW PROCESS FROM NODE     4.04 TO NODE     4.05 IS CODE = 5.3
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3820.00
 DOWNSTREAM NODE ELEVATION =   3740.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3200.00
 CHANNEL SLOPE =   .0250
 CHANNEL FLOW THRU SUBAREA(CFS) =     66.30
 SLOPE ADJUSTMENT CURVE USED:
 EFFECTIVE SLOPE = .0250 (PER LACFCD HYDROLOGY MANUAL)
 FLOW VELOCITY(FEET/SEC) =   3.58 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  14.90   TC(MIN.) =  81.76

****************************************************************************
 FLOW PROCESS FROM NODE     4.04 TO NODE     4.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.095
```

```
  SOIL CLASSIFICATION IS "A"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .7760
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .97
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA AREA(ACRES) =    9.12     SUBAREA RUNOFF(CFS) =    2.62
  EFFECTIVE AREA(ACRES) =   146.82   AREA-AVERAGED Fm(INCH/HR) =   .73
  AREA-AVERAGED Fp(INCH/HR) =   .91  AREA-AVERAGED Ap =   .80
  TOTAL AREA(ACRES) =   146.82       PEAK FLOW RATE(CFS) =   66.30
  TC(MIN) =  81.76

****************************************************************************
  FLOW PROCESS FROM NODE     4.04 TO NODE     4.05 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.095
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA AREA(ACRES) =  119.38      SUBAREA RUNOFF(CFS) =   69.53
  EFFECTIVE AREA(ACRES) =   266.20   AREA-AVERAGED Fm(INCH/HR) =   .60
  AREA-AVERAGED Fp(INCH/HR) =   .75  AREA-AVERAGED Ap =   .80
  TOTAL AREA(ACRES) =   266.20       PEAK FLOW RATE(CFS) =  117.92
  TC(MIN) =  81.76

****************************************************************************
  FLOW PROCESS FROM NODE     4.05 TO NODE     4.06 IS CODE = 5.3
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION =   3740.00
  DOWNSTREAM NODE ELEVATION =   3670.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3200.00
  CHANNEL SLOPE =   .0219
  CHANNEL FLOW THRU SUBAREA(CFS) =    117.92
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0219 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   4.06 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  13.15   TC(MIN.) =  94.91

****************************************************************************
  FLOW PROCESS FROM NODE     4.05 TO NODE     4.06 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =   .987
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 3-4 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3360
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .60
  SUBAREA AREA(ACRES) =   64.28      SUBAREA RUNOFF(CFS) =   37.63
  EFFECTIVE AREA(ACRES) =   330.48   AREA-AVERAGED Fm(INCH/HR) =   .55
  AREA-AVERAGED Fp(INCH/HR) =   .72  AREA-AVERAGED Ap =   .76
  TOTAL AREA(ACRES) =   330.48       PEAK FLOW RATE(CFS) =  129.54
  TC(MIN) =  94.91

****************************************************************************
  FLOW PROCESS FROM NODE     4.06 TO NODE     4.07 IS CODE = 5.3
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL MOUNTAIN CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION =   3670.00
  DOWNSTREAM NODE ELEVATION =   3560.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  4400.00
  CHANNEL SLOPE =   .0250
  CHANNEL FLOW THRU SUBAREA(CFS) =    129.54
  SLOPE ADJUSTMENT CURVE USED:
  EFFECTIVE SLOPE = .0250 (PER LACFCD HYDROLOGY MANUAL)
  FLOW VELOCITY(FEET/SEC) =   4.47 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  16.39   TC(MIN.) = 111.31

****************************************************************************
  FLOW PROCESS FROM NODE     4.06 TO NODE     4.07 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =   .882
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA AREA(ACRES) =  202.00      SUBAREA RUNOFF(CFS) =   78.98
  EFFECTIVE AREA(ACRES) =   532.48   AREA-AVERAGED Fm(INCH/HR) =   .51
  AREA-AVERAGED Fp(INCH/HR) =   .66  AREA-AVERAGED Ap =   .78
  TOTAL AREA(ACRES) =   532.48       PEAK FLOW RATE(CFS) =  177.55
  TC(MIN) = 111.31

****************************************************************************
  FLOW PROCESS FROM NODE     4.07 TO NODE     4.08 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
```

```
>>>>>TRAVELTIME THRU SUBAREA<<<<<
================================================================================
 UPSTREAM NODE ELEVATION =   3560.00
 DOWNSTREAM NODE ELEVATION =   3470.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3900.00
 CHANNEL SLOPE =   .0231
 CHANNEL FLOW THRU SUBAREA(CFS) =    177.55
 FLOW VELOCITY(FEET/SEC) =   8.59 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   7.57   TC(MIN.) = 118.88


********************************************************************************
 FLOW PROCESS FROM NODE     4.07 TO NODE     4.08 IS CODE =   8
--------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .843
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   81.70      SUBAREA RUNOFF(CFS) =   29.02
 EFFECTIVE AREA(ACRES) =   614.18   AREA-AVERAGED Fm(INCH/HR) =   .50
 AREA-AVERAGED Fp(INCH/HR) =   .65  AREA-AVERAGED Ap =   .78
 TOTAL AREA(ACRES) =   614.18       PEAK FLOW RATE(CFS) =  187.54
 TC(MIN) = 118.88


********************************************************************************
 FLOW PROCESS FROM NODE     4.08 TO NODE     4.09 IS CODE = 5.2
--------------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
================================================================================
 UPSTREAM NODE ELEVATION =   3470.00
 DOWNSTREAM NODE ELEVATION =   3400.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3500.00
 CHANNEL SLOPE =   .0200
 CHANNEL FLOW THRU SUBAREA(CFS) =    187.54
 FLOW VELOCITY(FEET/SEC) =   8.13 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   7.17   TC(MIN.) = 126.05


********************************************************************************
 FLOW PROCESS FROM NODE     4.08 TO NODE     4.09 IS CODE =   8
--------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .809
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   26.60      SUBAREA RUNOFF(CFS) =    8.64
 EFFECTIVE AREA(ACRES) =   640.78   AREA-AVERAGED Fm(INCH/HR) =   .50
 AREA-AVERAGED Fp(INCH/HR) =   .64  AREA-AVERAGED Ap =   .78
 TOTAL AREA(ACRES) =   640.78       PEAK FLOW RATE(CFS) =  187.54
 TC(MIN) = 126.05


********************************************************************************
 FLOW PROCESS FROM NODE     4.08 TO NODE     4.09 IS CODE =   8
--------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .809
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .6000
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =   31.20      SUBAREA RUNOFF(CFS) =    5.86
 EFFECTIVE AREA(ACRES) =   671.98   AREA-AVERAGED Fm(INCH/HR) =   .51
 AREA-AVERAGED Fp(INCH/HR) =   .65  AREA-AVERAGED Ap =   .78
 TOTAL AREA(ACRES) =   671.98       PEAK FLOW RATE(CFS) =  187.54
 TC(MIN) = 126.05
================================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)      =    671.98  TC(MIN.) =    126.05
 EFFECTIVE AREA(ACRES) =    671.98  AREA-AVERAGED Fm(INCH/HR)=   .51
 AREA-AVERAGED Fp(INCH/HR) =   .65  AREA-AVERAGED Ap =   .78
 PEAK FLOW RATE(CFS)    =    187.54
================================================================================
================================================================================
 END OF RATIONAL METHOD ANALYSIS
```

```
**************************************************************************
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 ************************** DESCRIPTION OF STUDY **************************
*                          DESIGN NODE 1.18                              *
*       TIME OF CONCENTRATION FOR WATERSHED 1A AT NODE 1.18              *
*                                                                        *
 **************************************************************************

  FILE NAME: R1A-118.INP
  TIME/DATE OF STUDY: 12:30   6/25/1992
==========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3600


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
  DEVELOPMENT IS  SINGLE FAMILY RESIDENTIAL -> 2 DWELLINGS/ACRE
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
  UPSTREAM ELEVATION(FEET) =   3175.00
  DOWNSTREAM ELEVATION(FEET) =   3160.00
  ELEVATION DIFFERENCE(FEET) =     15.00
  TC(MIN.) =  .438*[( 1000.00** 3.00)/(    15.00)]** .20 =   16.079
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.419
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
  SUBAREA RUNOFF(CFS) =     12.26
  TOTAL AREA(ACRES) =      4.50   PEAK FLOW RATE(CFS) =     12.26

**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE = 5.2
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   3160.00
  DOWNSTREAM NODE ELEVATION =   3130.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2000.00
  CHANNEL SLOPE =   .0150
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.26
  FLOW VELOCITY(FEET/SEC) =   3.22 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  10.34   TC(MIN.) =  26.42

**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.415
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
  SUBAREA AREA(ACRES) =   36.70     SUBAREA RUNOFF(CFS) =   66.82
  EFFECTIVE AREA(ACRES) =   41.20   AREA-AVERAGED Fm(INCH/HR) =   .39
  AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .70
  TOTAL AREA(ACRES) =   41.20       PEAK FLOW RATE(CFS) =   75.02
  TC(MIN) =  26.42

**************************************************************************
  FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE = 5.2
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   3130.00
  DOWNSTREAM NODE ELEVATION =   3090.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  3100.00
  CHANNEL SLOPE =   .0129
```

```
 CHANNEL FLOW THRU SUBAREA(CFS) =     75.02
 FLOW VELOCITY(FEET/SEC) =   4.95 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  10.44   TC(MIN.) =  36.85

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.913
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =  150.50     SUBAREA RUNOFF(CFS) =  206.01
 EFFECTIVE AREA(ACRES) =   191.70   AREA-AVERAGED Fm(INCH/HR) =   .39
 AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .70
 TOTAL AREA(ACRES) =   191.70       PEAK FLOW RATE(CFS) =  262.41
 TC(MIN) =  36.85

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.913
 SOIL CLASSIFICATION IS "C"
 PUBLIC PARK SUBAREA LOSS RATE, Fm(INCH/HR) =  .4760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .85
 SUBAREA AREA(ACRES) =    7.50     SUBAREA RUNOFF(CFS) =    9.70
 EFFECTIVE AREA(ACRES) =   199.20   AREA-AVERAGED Fm(INCH/HR) =   .40
 AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .71
 TOTAL AREA(ACRES) =   199.20       PEAK FLOW RATE(CFS) =  272.11
 TC(MIN) =  36.85

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.04 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3090.00
 DOWNSTREAM NODE ELEVATION =   3040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3800.00
 CHANNEL SLOPE =   .0132
 CHANNEL FLOW THRU SUBAREA(CFS) =    272.11
 FLOW VELOCITY(FEET/SEC) =   7.41 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   8.55   TC(MIN.) =  45.41

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.653
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =  290.10     SUBAREA RUNOFF(CFS) =  329.22
 EFFECTIVE AREA(ACRES) =   489.30   AREA-AVERAGED Fm(INCH/HR) =   .39
 AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .70
 TOTAL AREA(ACRES) =   489.30       PEAK FLOW RATE(CFS) =  554.72
 TC(MIN) =  45.41

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.653
 SOIL CLASSIFICATION IS "C"
 PUBLIC PARK SUBAREA LOSS RATE, Fm(INCH/HR) =  .4760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .85
 SUBAREA AREA(ACRES) =   18.00     SUBAREA RUNOFF(CFS) =   19.07
 EFFECTIVE AREA(ACRES) =   507.30   AREA-AVERAGED Fm(INCH/HR) =   .40
 AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .71
 TOTAL AREA(ACRES) =   507.30       PEAK FLOW RATE(CFS) =  573.78
 TC(MIN) =  45.41

****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.18 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3040.00
 DOWNSTREAM NODE ELEVATION =   2980.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  5400.00
 CHANNEL SLOPE =   .0111
 CHANNEL FLOW THRU SUBAREA(CFS) =    573.78
 FLOW VELOCITY(FEET/SEC) =   8.63 (PER LACFCD HYDROLOGY MANUAL)
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 TRAVEL TIME(MIN.) =  10.43   TC(MIN.) =  55.84

****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.430
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .5250
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =  154.20      SUBAREA RUNOFF(CFS) =  125.62
 EFFECTIVE AREA(ACRES) =   661.50   AREA-AVERAGED Fm(INCH/HR) =   .43
 AREA-AVERAGED Fp(INCH/HR) =   .60  AREA-AVERAGED Ap =   .71
 TOTAL AREA(ACRES) =   661.50       PEAK FLOW RATE(CFS) =  597.69
 TC(MIN) =  55.84

****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.430
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =   10.00      SUBAREA RUNOFF(CFS) =    9.34
 EFFECTIVE AREA(ACRES) =   671.50   AREA-AVERAGED Fm(INCH/HR) =   .43
 AREA-AVERAGED Fp(INCH/HR) =   .60  AREA-AVERAGED Ap =   .71
 TOTAL AREA(ACRES) =   671.50       PEAK FLOW RATE(CFS) =  607.04
 TC(MIN) =  55.84

****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.430
 SOIL CLASSIFICATION IS "B"
 PUBLIC PARK SUBAREA LOSS RATE, Fm(INCH/HR) =  .6375
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .85
 SUBAREA AREA(ACRES) =   10.00      SUBAREA RUNOFF(CFS) =    7.13
 EFFECTIVE AREA(ACRES) =   681.50   AREA-AVERAGED Fm(INCH/HR) =   .43
 AREA-AVERAGED Fp(INCH/HR) =   .61  AREA-AVERAGED Ap =   .71
 TOTAL AREA(ACRES) =   681.50       PEAK FLOW RATE(CFS) =  614.17
 TC(MIN) =  55.84

****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.430
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 5-7 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3750
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .50
 SUBAREA AREA(ACRES) =  114.00      SUBAREA RUNOFF(CFS) =  108.26
 EFFECTIVE AREA(ACRES) =   795.50   AREA-AVERAGED Fm(INCH/HR) =   .42
 AREA-AVERAGED Fp(INCH/HR) =   .62  AREA-AVERAGED Ap =   .68
 TOTAL AREA(ACRES) =   795.50       PEAK FLOW RATE(CFS) =  722.43
 TC(MIN) =  55.84

****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.430
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 5-7 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .2800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .50
 SUBAREA AREA(ACRES) =   64.00      SUBAREA RUNOFF(CFS) =   66.25
 EFFECTIVE AREA(ACRES) =   859.50   AREA-AVERAGED Fm(INCH/HR) =   .41
 AREA-AVERAGED Fp(INCH/HR) =   .62  AREA-AVERAGED Ap =   .66
 TOTAL AREA(ACRES) =   859.50       PEAK FLOW RATE(CFS) =  788.68
 TC(MIN) =  55.84

****************************************************************************
 FLOW PROCESS FROM NODE     1.04 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.430
 SOIL CLASSIFICATION IS "C"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0560
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =   73.00      SUBAREA RUNOFF(CFS) =   90.28
 EFFECTIVE AREA(ACRES) =   932.50   AREA-AVERAGED Fm(INCH/HR) =   .38
```

```
  AREA-AVERAGED Fp(INCH/HR) =   .62  AREA-AVERAGED Ap =   .62
  TOTAL AREA(ACRES) =   932.50       PEAK FLOW RATE(CFS) =  878.96
  TC(MIN) =  55.84
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)      =    932.50  TC(MIN.) =     55.84
  EFFECTIVE AREA(ACRES) =    932.50  AREA-AVERAGED Fm(INCH/HR)=   .38
  AREA-AVERAGED Fp(INCH/HR) =   .62  AREA-AVERAGED Ap =   .62
  PEAK FLOW RATE(CFS)    =    878.96
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

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**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
       (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
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          Ver. 1.5A  Release Date: 3/05/92  License ID 1263

                        Analysis prepared by:

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       23332 MILL CREEK DRIVE, SUITE 100, LAGUNA HILLS, CA 92653
      TELEPHONE: (714) 586 - 6121          FAX: (714) 586 - 2217

 ************************** DESCRIPTION OF STUDY **************************
*                          DESIGN NODE 1.18                              *
*        TIME OF CONCENTRATION FOR WATERSHED 1B AT NODE 1.18             *
*                                                                        *
 **************************************************************************

  FILE NAME: R1B-118.INP
  TIME/DATE OF STUDY: 12:34   6/25/1992
==========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3600


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
  DEVELOPMENT IS  SINGLE FAMILY RESIDENTIAL -> 1 DWELLING/ACRE
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
  UPSTREAM ELEVATION(FEET) =   3130.00
  DOWNSTREAM ELEVATION(FEET) =   3095.00
  ELEVATION DIFFERENCE(FEET) =     35.00
  TC(MIN.) =  .469*[( 1000.00** 3.00)/(    35.00)]** .20 =   14.533
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.669
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA RUNOFF(CFS) =      8.99
  TOTAL AREA(ACRES) =      3.10   PEAK FLOW RATE(CFS) =      8.99


**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE = 5.2
--------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
==========================================================================
  UPSTREAM NODE ELEVATION =   3095.00
  DOWNSTREAM NODE ELEVATION =   3075.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2200.00
  CHANNEL SLOPE =   .0091
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.99
  FLOW VELOCITY(FEET/SEC) =   2.32 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  15.81   TC(MIN.) =  30.34


**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.192
  SOIL CLASSIFICATION IS "C"
  PUBLIC PARK SUBAREA LOSS RATE, Fm(INCH/HR) =  .4760
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .85
  SUBAREA AREA(ACRES) =    2.00     SUBAREA RUNOFF(CFS) =    3.09
  EFFECTIVE AREA(ACRES) =     5.10   AREA-AVERAGED Fm(INCH/HR) =   .46
  AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .82
  TOTAL AREA(ACRES) =     5.10       PEAK FLOW RATE(CFS) =    8.99
  TC(MIN) =  30.34


**************************************************************************
  FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.192
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
```

```
  SUBAREA AREA(ACRES) =     3.10      SUBAREA RUNOFF(CFS) =     5.02
  EFFECTIVE AREA(ACRES) =     8.20   AREA-AVERAGED Fm(INCH/HR) =   .43
  AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .77
  TOTAL AREA(ACRES) =     8.20       PEAK FLOW RATE(CFS) =   12.98
  TC(MIN) =  30.34

****************************************************************************
  FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION =   3075.00
  DOWNSTREAM NODE ELEVATION =   3040.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =  2900.00
  CHANNEL SLOPE =    .0121
  CHANNEL FLOW THRU SUBAREA(CFS) =     12.98
  FLOW VELOCITY(FEET/SEC) =   2.94 (PER LACFCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =  16.47   TC(MIN.) =  46.81

****************************************************************************
  FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.618
  SOIL CLASSIFICATION IS "B"
  COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0750
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
  SUBAREA AREA(ACRES) =     3.10      SUBAREA RUNOFF(CFS) =     4.31
  EFFECTIVE AREA(ACRES) =    11.30   AREA-AVERAGED Fm(INCH/HR) =   .34
  AREA-AVERAGED Fp(INCH/HR) =   .57  AREA-AVERAGED Ap =   .59
  TOTAL AREA(ACRES) =    11.30       PEAK FLOW RATE(CFS) =   13.05
  TC(MIN) =  46.81

****************************************************************************
  FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.618
  SOIL CLASSIFICATION IS "C"
  COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0560
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
  SUBAREA AREA(ACRES) =     3.10      SUBAREA RUNOFF(CFS) =     4.36
  EFFECTIVE AREA(ACRES) =    14.40   AREA-AVERAGED Fm(INCH/HR) =   .28
  AREA-AVERAGED Fp(INCH/HR) =   .57  AREA-AVERAGED Ap =   .48
  TOTAL AREA(ACRES) =    14.40       PEAK FLOW RATE(CFS) =   17.41
  TC(MIN) =  46.81

****************************************************************************
  FLOW PROCESS FR
****************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
         (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
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           Ver. 1.5A  Release Date: 3/05/92  License ID 1263

                        Analysis prepared by:

                     R I V E R T E C H   I N C.
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        23332 MILL CREEK DRIVE, SUITE 100, LAGUNA HILLS, CA 92653
      TELEPHONE: (714) 586 - 6121            FAX: (714) 586 - 2217

 ************************** DESCRIPTION OF STUDY **************************
*                          DESIGN NODE 1.18                                *
*         TIME OF CONCENTRATION FOR WATERSHED 1B AT NODE 1.18              *
*                                                                          *
 ****************************************************************************

  FILE NAME: R1B-118.INP
  TIME/DATE OF STUDY: 12:34   6/25/1992
============================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.3600

****************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.01 IS CODE = 2.1
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
  DEVELOPMENT IS  SINGLE FAMILY RESIDENTIAL -> 1 DWELLING/ACRE
```

```
 TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
 INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
 UPSTREAM ELEVATION(FEET) =   3130.00
 DOWNSTREAM ELEVATION(FEET) =   3095.00
 ELEVATION DIFFERENCE(FEET) =     35.00
 TC(MIN.) =  .469*[( 1000.00** 3.00)/(    35.00)]** .20 =   14.533
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  3.669
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA RUNOFF(CFS) =      8.99
 TOTAL AREA(ACRES) =      3.10   PEAK FLOW RATE(CFS) =      8.99

****************************************************************************
 FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3095.00
 DOWNSTREAM NODE ELEVATION =   3075.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2200.00
 CHANNEL SLOPE =   .0091
 CHANNEL FLOW THRU SUBAREA(CFS) =      8.99
 FLOW VELOCITY(FEET/SEC) =   2.32 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  15.81   TC(MIN.) =  30.34

****************************************************************************
 FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.192
 SOIL CLASSIFICATION IS "C"
 PUBLIC PARK SUBAREA LOSS RATE, Fm(INCH/HR) =  .4760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .85
 SUBAREA AREA(ACRES) =    2.00     SUBAREA RUNOFF(CFS) =    3.09
 EFFECTIVE AREA(ACRES) =    5.10   AREA-AVERAGED Fm(INCH/HR) =   .46
 AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .82
 TOTAL AREA(ACRES) =    5.10       PEAK FLOW RATE(CFS) =    8.99
 TC(MIN) =  30.34

****************************************************************************
 FLOW PROCESS FROM NODE     1.01 TO NODE     1.02 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.192
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =    3.10     SUBAREA RUNOFF(CFS) =    5.02
 EFFECTIVE AREA(ACRES) =    8.20   AREA-AVERAGED Fm(INCH/HR) =   .43
 AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .77
 TOTAL AREA(ACRES) =    8.20       PEAK FLOW RATE(CFS) =   12.98
 TC(MIN) =  30.34

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3075.00
 DOWNSTREAM NODE ELEVATION =   3040.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2900.00
 CHANNEL SLOPE =   .0121
 CHANNEL FLOW THRU SUBAREA(CFS) =     12.98
 FLOW VELOCITY(FEET/SEC) =   2.94 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  16.47   TC(MIN.) =  46.81

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.618
 SOIL CLASSIFICATION IS "B"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0750
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =    3.10     SUBAREA RUNOFF(CFS) =    4.31
 EFFECTIVE AREA(ACRES) =   11.30   AREA-AVERAGED Fm(INCH/HR) =   .34
 AREA-AVERAGED Fp(INCH/HR) =   .57  AREA-AVERAGED Ap =   .59
 TOTAL AREA(ACRES) =   11.30       PEAK FLOW RATE(CFS) =   13.05
 TC(MIN) =  46.81

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
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```
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.618
 SOIL CLASSIFICATION IS "C"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0560
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =    3.10     SUBAREA RUNOFF(CFS) =    4.36
 EFFECTIVE AREA(ACRES) =   14.40   AREA-AVERAGED Fm(INCH/HR) =   .28
 AREA-AVERAGED Fp(INCH/HR) =   .57  AREA-AVERAGED Ap =   .48
 TOTAL AREA(ACRES) =   14.40       PEAK FLOW RATE(CFS) =   17.41
 TC(MIN) =  46.81

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.618
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =   73.00     SUBAREA RUNOFF(CFS) =   80.56
 EFFECTIVE AREA(ACRES) =   87.40   AREA-AVERAGED Fm(INCH/HR) =   .37
 AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .66
 TOTAL AREA(ACRES) =   87.40       PEAK FLOW RATE(CFS) =   97.97
 TC(MIN) =  46.81

****************************************************************************
 FLOW PROCESS FROM NODE     1.02 TO NODE     1.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.618
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .5250
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =    2.90     SUBAREA RUNOFF(CFS) =    2.85
 EFFECTIVE AREA(ACRES) =   90.30   AREA-AVERAGED Fm(INCH/HR) =   .38
 AREA-AVERAGED Fp(INCH/HR) =   .57  AREA-AVERAGED Ap =   .67
 TOTAL AREA(ACRES) =   90.30       PEAK FLOW RATE(CFS) =  100.82
 TC(MIN) =  46.81

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.18 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =  3040.00
 DOWNSTREAM NODE ELEVATION =  2980.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  6000.00
 CHANNEL SLOPE =  .0100
 CHANNEL FLOW THRU SUBAREA(CFS) =   100.82
 FLOW VELOCITY(FEET/SEC) =  4.76 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  21.02   TC(MIN.) =  67.82

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.248
 SOIL CLASSIFICATION IS "B"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0750
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =   72.20     SUBAREA RUNOFF(CFS) =   76.24
 EFFECTIVE AREA(ACRES) =  162.50   AREA-AVERAGED Fm(INCH/HR) =   .24
 AREA-AVERAGED Fp(INCH/HR) =   .59  AREA-AVERAGED Ap =   .41
 TOTAL AREA(ACRES) =  162.50       PEAK FLOW RATE(CFS) =  146.99
 TC(MIN) =  67.82

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
 100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.248
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 5-7 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3750
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .50
 SUBAREA AREA(ACRES) =   32.00     SUBAREA RUNOFF(CFS) =   25.15
 EFFECTIVE AREA(ACRES) =  194.50   AREA-AVERAGED Fm(INCH/HR) =   .26
 AREA-AVERAGED Fp(INCH/HR) =   .62  AREA-AVERAGED Ap =   .43
 TOTAL AREA(ACRES) =  194.50       PEAK FLOW RATE(CFS) =  172.14
 TC(MIN) =  67.82

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

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================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.248
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .5250
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =   18.40     SUBAREA RUNOFF(CFS) =   11.98
 EFFECTIVE AREA(ACRES) =  212.90   AREA-AVERAGED Fm(INCH/HR) =   .29
 AREA-AVERAGED Fp(INCH/HR) =   .64  AREA-AVERAGED Ap =   .45
 TOTAL AREA(ACRES) =  212.90       PEAK FLOW RATE(CFS) =  184.11
 TC(MIN) =  67.82

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.248
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 5-7 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .2800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .50
 SUBAREA AREA(ACRES) =   11.90     SUBAREA RUNOFF(CFS) =   10.37
 EFFECTIVE AREA(ACRES) =  224.80   AREA-AVERAGED Fm(INCH/HR) =   .29
 AREA-AVERAGED Fp(INCH/HR) =   .63  AREA-AVERAGED Ap =   .45
 TOTAL AREA(ACRES) =  224.80       PEAK FLOW RATE(CFS) =  194.48
 TC(MIN) =  67.82

****************************************************************************
 FLOW PROCESS FROM NODE     1.03 TO NODE     1.18 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.248
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3920
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =    1.90     SUBAREA RUNOFF(CFS) =    1.46
 EFFECTIVE AREA(ACRES) =  226.70   AREA-AVERAGED Fm(INCH/HR) =   .29
 AREA-AVERAGED Fp(INCH/HR) =   .63  AREA-AVERAGED Ap =   .46
 TOTAL AREA(ACRES) =  226.70       PEAK FLOW RATE(CFS) =  195.95
 TC(MIN) =  67.82
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)      =    226.70  TC(MIN.) =     67.82
 EFFECTIVE AREA(ACRES) =    226.70  AREA-AVERAGED Fm(INCH/HR)=   .29
 AREA-AVERAGED Fp(INCH/HR) =   .63  AREA-AVERAGED Ap =   .46
 PEAK FLOW RATE(CFS)    =    195.95
============================================================================
============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

LOSS AT NODE 1.05, WATERSHED 1,DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.05

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00

LOSS AT NODE 1.05, WATERSHED 1,DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.05

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11

LOSS AT NODE 1.05, WATERSHED 1,DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	706.42
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.092
LOW LOSS FRACTION (Y BAR)	=	.059

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23

WATERSHED 1, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	940.11
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.123
LOW LOSS FRACTION (Y BAR)	=	.103

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	46.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	46.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34

WATERSHED 1, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	2338.36
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.202
LOW LOSS FRACTION (Y BAR)	=	.215

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 1, DEASIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	466.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00

WATERSHED 1, DEASIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	466.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

WATERSHED 1, DEASIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34

WATERSHED 1, DEASIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	3489.29
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.218
LOW LOSS FRACTION (Y BAR)	=	.238

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	466.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00
1.13	225.89	.20	56.00

WATERSHED1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	466.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

WATERSHED1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34
1.13	180.71	.00	56.00	75.80	.42
1.13	45.18	1.00	98.00	98.00	.00
1.13	225.89	.20			.34

WATERSHED1, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	3715.18
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.225
LOW LOSS FRACTION (Y BAR)	=	.248

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	46.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00
1.13	225.89	.20	56.00
1.14	78.05	.20	56.00
1.41	5.50	.00	91.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.42A	22.10	.00	86.00
1.42B	1.70	.00	91.00
1.43A	83.60	.00	86.00
1.43B	11.10	.00	91.00
1.44A	44.90	.00	86.00
1.44B	33.15	.00	91.00
1.45A	67.95	.00	86.00
1.45B	10.95	.00	91.00
1.81	9.80	.00	91.00
1.82A	33.90	.00	91.00
18.82B	6.43	.00	86.00
1.83	26.40	.00	91.00
1.91	12.85	.00	91.00
1.92	45.00	.00	91.00
1.83B	7.40	.00	91.00
1.84A	67.00	.00	91.00
121	9.18	.00	91.00
1.84B	68.80	.00	91.00
1.45C	126.70	.00	91.00
1.61	10.00	.00	86.00
1.62	106.92	.00	86.00
1.45D	65.19	.00	86.00
1.45E	2.76	.00	91.00
1.46A	47.75	.00	91.00
17.1	7.05	.00	91.00
17.2	75.30	.00	91.00
1.46B	107.40	.00	91.00
1.47A	15.60	.20	69.00
1.47B	101.00	.00	91.00
1.48A	22.95	.20	56.00
1.48B	122.10	.20	69.00
1.48C	47.75	.00	91.00
1.49A	125.00	.20	56.00
1.49B	17.95	.20	69.00
1.49C	15.90	.00	91.00
1.50	183.65	.00	91.00
1.51A	123.10	.20	56.00
10.1	10.00	.00	91.00
10.2	116.80	.00	91.00
10.3	158.00	.00	91.00
10.4A	81.70	.00	91.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
11.1	10.00	.00	91.00
11.2	40.60	.00	91.00
11.3	78.97	.00	91.00
10.4B	101.00	.00	91.00
10.5A	140.50	.00	91.00
12.1	6.90	.00	91.00
12.2	18.40	.00	91.00
12.3	40.40	.00	91.00
12.4	44.50	.00	91.00
10.5B	97.30	.00	91.00
10.6A	86.30	.00	91.00
16.1	7.10	.00	91.00
16.2	26.60	.00	91.00
16.3	44.10	.00	91.00
10.6B	58.30	.00	91.00
10.7A	14.70	.20	56.00
10.7B	34.90	.20	69.00
10.7C	176.30	.00	91.00
10.8A	83.56	.20	56.00
10.8B	74.40	.20	69.00
10.9A	140.90	.20	56.00
10.9B	70.30	.20	91.00
1.51B	68.80	.20	56.00
1.51C	68.80	.20	69.00
1.52A	262.60	.20	56.00
1.52B	77.10	.20	69.00
1.53A	314.00	.20	56.00
1.53B	10.80	.20	69.00
14.1	7.90	.00	91.00
14.2	42.24	.00	91.00
14.3	50.50	.00	91.00
14.4A	8.10	.00	86.00
14.4B	24.80	.00	91.00
15.1	4.60	.00	91.00
15.2	47.75	.00	91.00
15.3A	9.20	.00	86.00
15.3B	76.20	.00	91.00
14.4C	3.10	.00	86.00
14.4D	6.20	.00	91.00
14.5A	42.30	.00	86.00
14.5B	22.00	.00	91.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
14.6A	78.10	.00	86.00
14.6B	24.80	.00	91.00
14.6C	3.50	.20	56.00
14.7A	3.80	.00	86.00
14.7B	1.80	.20	69.00
14.7C	160.70	.20	56.00
14.8A	29.40	.20	56.00
18.1	8.87	.00	91.00
18.2	42.30	.00	91.00
18.3	66.00	.00	91.00
18.4A	75.30	.00	91.00
18.4B	11.30	.20	69.00
18.5A	167.10	.20	69.00
18.5B	29.40	.00	91.00
18.5C	14.70	.20	56.00
14.8B	14.05	.20	56.00
13.8A	31.20	.20	56.00
13.1	5.20	.00	91.00
13.2	26.60	.00	91.00
13.3	33.98	.00	91.00
13.4A	35.00	.00	86.00
13.4B	109.30	.00	91.00
13.5A	127.60	.00	86.00
13.5B	19.25	.00	91.00
13.6A	192.80	.00	91.00
13.6B	64.30	.00	86.00
13.7A	134.98	.20	56.00
13.7B	12.00	.00	86.00
13.7C	22.00	.00	91.00
13.8B	51.50	.20	56.00
13.9	127.70	.20	56.00
13.10A	88.20	.20	56.00
13.10B	28.50	.20	69.00
13.11	81.70	.20	69.00
13.12A	62.40	.20	56.00
13.12B	15.70	.20	69.00
131	4.20	.20	69.00
132	31.22	.20	69.00
133A	9.20	.20	69.00
133B	56.90	.20	56.00
134A	165.30	.20	69.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
134B	90.90	.20	56.00
135A	257.00	.20	69.00
135B	58.80	.20	56.00
13.12C	21.10	.20	69.00
13.12D	17.70	.20	56.00
1.53C	17.70	.20	56.00
1.14B	190.10	.20	56.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	46.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34
1.13	180.71	.00	56.00	75.80	.42
1.13	45.18	1.00	98.00	98.00	.00
1.13	225.89	.20			.34
1.14	62.44	.00	56.00	75.80	.42
1.14	15.61	1.00	98.00	98.00	.00
1.14	78.05	.20			.34
1.41	5.50	.00	91.00	98.20	.06
1.42A	22.10	.00	86.00	97.20	.11
1.42B	1.70	.00	91.00	98.20	.06
1.43A	83.60	.00	86.00	97.20	.11
1.43B	11.10	.00	91.00	98.20	.06
1.44A	44.90	.00	86.00	97.20	.11

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.44B	33.15	.00	91.00	98.20	.06
1.45A	67.95	.00	86.00	97.20	.11
1.45B	10.95	.00	91.00	98.20	.06
1.81	9.80	.00	91.00	98.20	.06
1.82A	33.90	.00	91.00	98.20	.06
18.82B	6.43	.00	86.00	97.20	.11
1.83	26.40	.00	91.00	98.20	.06
1.91	12.85	.00	91.00	98.20	.06
1.92	45.00	.00	91.00	98.20	.06
1.83B	7.40	.00	91.00	98.20	.06
1.84A	67.00	.00	91.00	98.20	.06
121	9.18	.00	91.00	98.20	.06
1.84B	68.80	.00	91.00	98.20	.06
1.45C	126.70	.00	91.00	98.20	.06
1.61	10.00	.00	86.00	97.20	.11
1.62	106.92	.00	86.00	97.20	.11
1.45D	65.19	.00	86.00	97.20	.11
1.45E	2.76	.00	91.00	98.20	.06
1.46A	47.75	.00	91.00	98.20	.06
17.1	7.05	.00	91.00	98.20	.06
17.2	75.30	.00	91.00	98.20	.06
1.46B	107.40	.00	91.00	98.20	.06
1.47A	12.48	.00	69.00	86.20	.29
1.47A	3.12	1.00	98.00	98.00	.00
1.47A	15.60	.20			.23
1.47B	101.00	.00	91.00	98.20	.06
1.48A	18.36	.00	56.00	75.80	.42
1.48A	4.59	1.00	98.00	98.00	.00
1.48A	22.95	.20			.34
1.48B	97.68	.00	69.00	86.20	.29
1.48B	24.42	1.00	98.00	98.00	.00
1.48B	122.10	.20			.23
1.48C	47.75	.00	91.00	98.20	.06
1.49A	100.00	.00	56.00	75.80	.42
1.49A	25.00	1.00	98.00	98.00	.00
1.49A	125.00	.20			.34
1.49B	14.36	.00	69.00	86.20	.29
1.49B	3.59	1.00	98.00	98.00	.00
1.49B	17.95	.20			.23
1.49C	15.90	.00	91.00	98.20	.06
1.50	183.65	.00	91.00	98.20	.06

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51A	98.48	.00	56.00	75.80	.42
1.51A	24.62	1.00	98.00	98.00	.00
1.51A	123.10	.20			.34
10.1	10.00	.00	91.00	98.20	.06
10.2	116.80	.00	91.00	98.20	.06
10.3	158.00	.00	91.00	98.20	.06
10.4A	81.70	.00	91.00	98.20	.06
11.1	10.00	.00	91.00	98.20	.06
11.2	40.60	.00	91.00	98.20	.06
11.3	78.97	.00	91.00	98.20	.06
10.4B	101.00	.00	91.00	98.20	.06
10.5A	140.50	.00	91.00	98.20	.06
12.1	6.90	.00	91.00	98.20	.06
12.2	18.40	.00	91.00	98.20	.06
12.3	40.40	.00	91.00	98.20	.06
12.4	44.50	.00	91.00	98.20	.06
10.5B	97.30	.00	91.00	98.20	.06
10.6A	86.30	.00	91.00	98.20	.06
16.1	7.10	.00	91.00	98.20	.06
16.2	26.60	.00	91.00	98.20	.06
16.3	44.10	.00	91.00	98.20	.06
10.6B	58.30	.00	91.00	98.20	.06
10.7A	11.76	.00	56.00	75.80	.42
10.7A	2.94	1.00	98.00	98.00	.00
10.7A	14.70	.20			.34
10.7B	27.92	.00	69.00	86.20	.29
10.7B	6.98	1.00	98.00	98.00	.00
10.7B	34.90	.20			.23
10.7C	176.30	.00	91.00	98.20	.06
10.8A	66.85	.00	56.00	75.80	.42
10.8A	16.71	1.00	98.00	98.00	.00
10.8A	83.56	.20			.34
10.8B	59.52	.00	69.00	86.20	.29
10.8B	14.88	1.00	98.00	98.00	.00
10.8B	74.40	.20			.23
10.9A	112.72	.00	56.00	75.80	.42
10.9A	28.18	1.00	98.00	98.00	.00
10.9A	140.90	.20			.34
10.9B	56.24	.00	91.00	98.20	.06
10.9B	14.06	1.00	98.00	98.00	.00
10.9B	70.30	.20			.05

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51B	55.04	.00	56.00	75.80	.42
1.51B	13.76	1.00	98.00	98.00	.00
1.51B	68.80	.20			.34
1.51C	55.04	.00	69.00	86.20	.29
1.51C	13.76	1.00	98.00	98.00	.00
1.51C	68.80	.20			.23
1.52A	210.08	.00	56.00	75.80	.42
1.52A	52.52	1.00	98.00	98.00	.00
1.52A	262.60	.20			.34
1.52B	61.68	.00	69.00	86.20	.29
1.52B	15.42	1.00	98.00	98.00	.00
1.52B	77.10	.20			.23
1.53A	251.20	.00	56.00	75.80	.42
1.53A	62.80	1.00	98.00	98.00	.00
1.53A	314.00	.20			.34
1.53B	8.64	.00	69.00	86.20	.29
1.53B	2.16	1.00	98.00	98.00	.00
1.53B	10.80	.20			.23
14.1	7.90	.00	91.00	98.20	.06
14.2	42.24	.00	91.00	98.20	.06
14.3	50.50	.00	91.00	98.20	.06
14.4A	8.10	.00	86.00	97.20	.11
14.4B	24.80	.00	91.00	98.20	.06
15.1	4.60	.00	91.00	98.20	.06
15.2	47.75	.00	91.00	98.20	.06
15.3A	9.20	.00	86.00	97.20	.11
15.3B	76.20	.00	91.00	98.20	.06
14.4C	3.10	.00	86.00	97.20	.11
14.4D	6.20	.00	91.00	98.20	.06
14.5A	42.30	.00	86.00	97.20	.11
14.5B	22.00	.00	91.00	98.20	.06
14.6A	78.10	.00	86.00	97.20	.11
14.6B	24.80	.00	91.00	98.20	.06
14.6C	2.80	.00	56.00	75.80	.42
14.6C	.70	1.00	98.00	98.00	.00
14.6C	3.50	.20			.34
14.7A	3.80	.00	86.00	97.20	.11
14.7B	1.44	.00	69.00	86.20	.29
14.7B	.36	1.00	98.00	98.00	.00
14.7B	1.80	.20			.23
14.7C	128.56	.00	56.00	75.80	.42

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
14.7C	32.14	1.00	98.00	98.00	.00
14.7C	160.70	.20			.34
14.8A	23.52	.00	56.00	75.80	.42
14.8A	5.88	1.00	98.00	98.00	.00
14.8A	29.40	.20			.34
18.1	8.87	.00	91.00	98.20	.06
18.2	42.30	.00	91.00	98.20	.06
18.3	66.00	.00	91.00	98.20	.06
18.4A	75.30	.00	91.00	98.20	.06
18.4B	9.04	.00	69.00	86.20	.29
18.4B	2.26	1.00	98.00	98.00	.00
18.4B	11.30	.20			.23
18.5A	133.68	.00	69.00	86.20	.29
18.5A	33.42	1.00	98.00	98.00	.00
18.5A	167.10	.20			.23
18.5B	29.40	.00	91.00	98.20	.06
18.5C	11.76	.00	56.00	75.80	.42
18.5C	2.94	1.00	98.00	98.00	.00
18.5C	14.70	.20			.34
14.8B	11.24	.00	56.00	75.80	.42
14.8B	2.81	1.00	98.00	98.00	.00
14.8B	14.05	.20			.34
13.8A	24.96	.00	56.00	75.80	.42
13.8A	6.24	1.00	98.00	98.00	.00
13.8A	31.20	.20			.34
13.1	5.20	.00	91.00	98.20	.06
13.2	26.60	.00	91.00	98.20	.06
13.3	33.98	.00	91.00	98.20	.06
13.4A	35.00	.00	86.00	97.20	.11
13.4B	109.30	.00	91.00	98.20	.06
13.5A	127.60	.00	86.00	97.20	.11
13.5B	19.25	.00	91.00	98.20	.06
13.6A	192.80	.00	91.00	98.20	.06
13.6B	64.30	.00	86.00	97.20	.11
13.7A	107.98	.00	56.00	75.80	.42
13.7A	27.00	1.00	98.00	98.00	.00
13.7A	134.98	.20			.34
13.7B	12.00	.00	86.00	97.20	.11
13.7C	22.00	.00	91.00	98.20	.06
13.8B	41.20	.00	56.00	75.80	.42
13.8B	10.30	1.00	98.00	98.00	.00
13.8B	51.50	.20			.34

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.9	102.16	.00	56.00	75.80	.42
13.9	25.54	1.00	98.00	98.00	.00
13.9	127.70	.20			.34
13.10A	70.56	.00	56.00	75.80	.42
13.10A	17.64	1.00	98.00	98.00	.00
13.10A	88.20	.20			.34
13.10B	22.80	.00	69.00	86.20	.29
13.10B	5.70	1.00	98.00	98.00	.00
13.10B	28.50	.20			.23
13.11	65.36	.00	69.00	86.20	.29
13.11	16.34	1.00	98.00	98.00	.00
13.11	81.70	.20			.23
13.12A	49.92	.00	56.00	75.80	.42
13.12A	12.48	1.00	98.00	98.00	.00
13.12A	62.40	.20			.34
13.12B	12.56	.00	69.00	86.20	.29
13.12B	3.14	1.00	98.00	98.00	.00
13.12B	15.70	.20			.23
131	3.36	.00	69.00	86.20	.29
131	.84	1.00	98.00	98.00	.00
131	4.20	.20			.23
132	24.98	.00	69.00	86.20	.29
132	6.24	1.00	98.00	98.00	.00
132	31.22	.20			.23
133A	7.36	.00	69.00	86.20	.29
133A	1.84	1.00	98.00	98.00	.00
133A	9.20	.20			.23
133B	45.52	.00	56.00	75.80	.42
133B	11.38	1.00	98.00	98.00	.00
133B	56.90	.20			.34
134A	132.24	.00	69.00	86.20	.29
134A	33.06	1.00	98.00	98.00	.00
134A	165.30	.20			.23
134B	72.72	.00	56.00	75.80	.42
134B	18.18	1.00	98.00	98.00	.00
134B	90.90	.20			.34
135A	205.60	.00	69.00	86.20	.29
135A	51.40	1.00	98.00	98.00	.00
135A	257.00	.20			.23
135B	47.04	.00	56.00	75.80	.42
135B	11.76	1.00	98.00	98.00	.00
135B	58.80	.20			.34

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.14

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.12C	16.88	.00	69.00	86.20	.29
13.12C	4.22	1.00	98.00	98.00	.00
13.12C	21.10	.20			.23
13.12D	14.16	.00	56.00	75.80	.42
13.12D	3.54	1.00	98.00	98.00	.00
13.12D	17.70	.20			.34
1.53C	14.16	.00	56.00	75.80	.42
1.53C	3.54	1.00	98.00	98.00	.00
1.53C	17.70	.20			.34
1.14B	152.08	.00	56.00	75.80	.42
1.14B	38.02	1.00	98.00	98.00	.00
1.14B	190.10	.20			.34

WATERSHED 1, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	11095.67
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.195
LOW LOSS FRACTION (Y BAR)	=	.214

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	46.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00
1.13	225.89	.20	56.00
1.14	78.05	.20	56.00
1.41	5.50	.00	91.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.42A	22.10	.00	86.00
1.42B	1.70	.00	91.00
1.43A	83.60	.00	86.00
1.43B	11.10	.00	91.00
1.44A	44.90	.00	86.00
1.44B	33.15	.00	91.00
1.45A	67.95	.00	86.00
1.45B	10.95	.00	91.00
1.81	9.80	.00	91.00
1.82A	33.90	.00	91.00
18.82B	6.43	.00	86.00
1.83	26.40	.00	91.00
1.91	12.85	.00	91.00
1.92	45.00	.00	91.00
1.83B	7.40	.00	91.00
1.84A	67.00	.00	91.00
121	9.18	.00	91.00
1.84B	68.80	.00	91.00
1.45C	126.70	.00	91.00
1.61	10.00	.00	86.00
1.62	106.92	.00	86.00
1.45D	65.19	.00	86.00
1.45E	2.76	.00	91.00
1.46A	47.75	.00	91.00
17.1	7.05	.00	91.00
17.2	75.30	.00	91.00
1.46B	107.40	.00	91.00
1.47A	15.60	.20	69.00
1.47B	101.00	.00	91.00
1.48A	22.95	.20	56.00
1.48B	122.10	.20	69.00
1.48C	47.75	.00	91.00
1.49A	125.00	.20	56.00
1.49B	17.95	.20	69.00
1.49C	15.90	.00	91.00
1.50	183.65	.00	91.00
1.51A	123.10	.20	56.00
10.1	10.00	.00	91.00
10.2	116.80	.00	91.00
10.3	158.00	.00	91.00
10.4A	81.70	.00	91.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
11.1	10.00	.00	91.00
11.2	40.60	.00	91.00
11.3	78.97	.00	91.00
10.4B	101.00	.00	91.00
10.5A	140.50	.00	91.00
12.1	6.90	.00	91.00
12.2	18.40	.00	91.00
12.3	40.40	.00	91.00
12.4	44.50	.00	91.00
10.5B	97.30	.00	91.00
10.6A	86.30	.00	91.00
16.1	7.10	.00	91.00
16.2	26.60	.00	91.00
16.3	44.10	.00	91.00
10.6B	58.30	.00	91.00
10.7A	14.70	.20	56.00
10.7B	34.90	.20	69.00
10.7C	176.30	.00	91.00
10.8A	83.56	.20	56.00
10.8B	74.40	.20	69.00
10.9A	140.90	.20	56.00
10.9B	70.30	.20	91.00
1.51B	68.80	.20	56.00
1.51C	68.80	.20	69.00
1.52A	262.60	.20	56.00
1.52B	77.10	.20	69.00
1.53A	314.00	.20	56.00
1.53B	10.80	.20	69.00
14.1	7.90	.00	91.00
14.2	42.24	.00	91.00
14.3	50.50	.00	91.00
14.4A	8.10	.00	86.00
14.4B	24.80	.00	91.00
15.1	4.60	.00	91.00
15.2	47.75	.00	91.00
15.3A	9.20	.00	86.00
15.3B	76.20	.00	91.00
14.4C	3.10	.00	86.00
14.4D	6.20	.00	91.00
14.5A	42.30	.00	86.00
14.5B	22.00	.00	91.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
14.6A	78.10	.00	86.00
14.6B	24.80	.00	91.00
14.6C	3.50	.20	56.00
14.7A	3.80	.00	86.00
14.7B	1.80	.20	69.00
14.7C	160.70	.20	56.00
14.8A	29.40	.20	56.00
18.1	8.87	.00	91.00
18.2	42.30	.00	91.00
18.3	66.00	.00	91.00
18.4A	75.30	.00	91.00
18.4B	11.30	.20	69.00
18.5A	167.10	.20	69.00
18.5B	29.40	.00	91.00
18.5C	14.70	.20	56.00
14.8B	14.05	.20	56.00
13.8A	31.20	.20	56.00
13.1	5.20	.00	91.00
13.2	26.60	.00	91.00
13.3	33.98	.00	91.00
13.4A	35.00	.00	86.00
13.4B	109.30	.00	91.00
13.5A	127.60	.00	86.00
13.5B	19.25	.00	91.00
13.6A	192.80	.00	91.00
13.6B	64.30	.00	86.00
13.7A	134.98	.20	56.00
13.7B	12.00	.00	86.00
13.7C	22.00	.00	91.00
13.8B	51.50	.20	56.00
13.9	127.70	.20	56.00
13.10A	88.20	.20	56.00
13.10B	28.50	.20	69.00
13.11	81.70	.20	69.00
13.12A	62.40	.20	56.00
13.12B	15.70	.20	69.00
131	4.20	.20	69.00
132	31.22	.20	69.00
133A	9.20	.20	69.00
133B	56.90	.20	56.00
134A	165.30	.20	69.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
134B	90.90	.20	56.00
135A	257.00	.20	69.00
135B	58.80	.20	56.00
13.12C	21.10	.20	69.00
13.12D	17.70	.20	56.00
1.53C	17.70	.20	56.00
1.14B	190.10	.20	56.00
1.15	417.81	.20	56.00
1.16A	73.46	.20	56.00
1.16B	72.54	.20	69.00
19.1A	2.40	.20	56.00
19.1B	6.40	.20	69.00
19.2	13.80	.20	56.00
19.3A	80.80	.20	56.00
19.3B	11.00	.20	69.00
19.4	218.50	.20	56.00
19.5	476.60	.20	56.00
19.6	238.75	.20	56.00
19.7	116.60	.20	56.00
19.8A	733.70	.20	56.00
19.8B	20.80	.20	69.00
1.16C	313.10	.20	56.00
1.16D	275.50	.20	69.00

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	46.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34
1.13	180.71	.00	56.00	75.80	.42
1.13	45.18	1.00	98.00	98.00	.00
1.13	225.89	.20			.34
1.14	62.44	.00	56.00	75.80	.42
1.14	15.61	1.00	98.00	98.00	.00
1.14	78.05	.20			.34
1.41	5.50	.00	91.00	98.20	.06
1.42A	22.10	.00	86.00	97.20	.11
1.42B	1.70	.00	91.00	98.20	.06
1.43A	83.60	.00	86.00	97.20	.11
1.43B	11.10	.00	91.00	98.20	.06
1.44A	44.90	.00	86.00	97.20	.11

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.44B	33.15	.00	91.00	98.20	.06
1.45A	67.95	.00	86.00	97.20	.11
1.45B	10.95	.00	91.00	98.20	.06
1.81	9.80	.00	91.00	98.20	.06
1.82A	33.90	.00	91.00	98.20	.06
18.82B	6.43	.00	86.00	97.20	.11
1.83	26.40	.00	91.00	98.20	.06
1.91	12.85	.00	91.00	98.20	.06
1.92	45.00	.00	91.00	98.20	.06
1.83B	7.40	.00	91.00	98.20	.06
1.84A	67.00	.00	91.00	98.20	.06
121	9.18	.00	91.00	98.20	.06
1.84B	68.80	.00	91.00	98.20	.06
1.45C	126.70	.00	91.00	98.20	.06
1.61	10.00	.00	86.00	97.20	.11
1.62	106.92	.00	86.00	97.20	.11
1.45D	65.19	.00	86.00	97.20	.11
1.45E	2.76	.00	91.00	98.20	.06
1.46A	47.75	.00	91.00	98.20	.06
17.1	7.05	.00	91.00	98.20	.06
17.2	75.30	.00	91.00	98.20	.06
1.46B	107.40	.00	91.00	98.20	.06
1.47A	12.48	.00	69.00	86.20	.29
1.47A	3.12	1.00	98.00	98.00	.00
1.47A	15.60	.20			.23
1.47B	101.00	.00	91.00	98.20	.06
1.48A	18.36	.00	56.00	75.80	.42
1.48A	4.59	1.00	98.00	98.00	.00
1.48A	22.95	.20			.34
1.48B	97.68	.00	69.00	86.20	.29
1.48B	24.42	1.00	98.00	98.00	.00
1.48B	122.10	.20			.23
1.48C	47.75	.00	91.00	98.20	.06
1.49A	100.00	.00	56.00	75.80	.42
1.49A	25.00	1.00	98.00	98.00	.00
1.49A	125.00	.20			.34
1.49B	14.36	.00	69.00	86.20	.29
1.49B	3.59	1.00	98.00	98.00	.00
1.49B	17.95	.20			.23
1.49C	15.90	.00	91.00	98.20	.06
1.50	183.65	.00	91.00	98.20	.06

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51A	98.48	.00	56.00	75.80	.42
1.51A	24.62	1.00	98.00	98.00	.00
1.51A	123.10	.20			.34
10.1	10.00	.00	91.00	98.20	.06
10.2	116.80	.00	91.00	98.20	.06
10.3	158.00	.00	91.00	98.20	.06
10.4A	81.70	.00	91.00	98.20	.06
11.1	10.00	.00	91.00	98.20	.06
11.2	40.60	.00	91.00	98.20	.06
11.3	78.97	.00	91.00	98.20	.06
10.4B	101.00	.00	91.00	98.20	.06
10.5A	140.50	.00	91.00	98.20	.06
12.1	6.90	.00	91.00	98.20	.06
12.2	18.40	.00	91.00	98.20	.06
12.3	40.40	.00	91.00	98.20	.06
12.4	44.50	.00	91.00	98.20	.06
10.5B	97.30	.00	91.00	98.20	.06
10.6A	86.30	.00	91.00	98.20	.06
16.1	7.10	.00	91.00	98.20	.06
16.2	26.60	.00	91.00	98.20	.06
16.3	44.10	.00	91.00	98.20	.06
10.6B	58.30	.00	91.00	98.20	.06
10.7A	11.76	.00	56.00	75.80	.42
10.7A	2.94	1.00	98.00	98.00	.00
10.7A	14.70	.20			.34
10.7B	27.92	.00	69.00	86.20	.29
10.7B	6.98	1.00	98.00	98.00	.00
10.7B	34.90	.20			.23
10.7C	176.30	.00	91.00	98.20	.06
10.8A	66.85	.00	56.00	75.80	.42
10.8A	16.71	1.00	98.00	98.00	.00
10.8A	83.56	.20			.34
10.8B	59.52	.00	69.00	86.20	.29
10.8B	14.88	1.00	98.00	98.00	.00
10.8B	74.40	.20			.23
10.9A	112.72	.00	56.00	75.80	.42
10.9A	28.18	1.00	98.00	98.00	.00
10.9A	140.90	.20			.34
10.9B	56.24	.00	91.00	98.20	.06
10.9B	14.06	1.00	98.00	98.00	.00
10.9B	70.30	.20			.05

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51B	55.04	.00	56.00	75.80	.42
1.51B	13.76	1.00	98.00	98.00	.00
1.51B	68.80	.20			.34
1.51C	55.04	.00	69.00	86.20	.29
1.51C	13.76	1.00	98.00	98.00	.00
1.51C	68.80	.20			.23
1.52A	210.08	.00	56.00	75.80	.42
1.52A	52.52	1.00	98.00	98.00	.00
1.52A	262.60	.20			.34
1.52B	61.68	.00	69.00	86.20	.29
1.52B	15.42	1.00	98.00	98.00	.00
1.52B	77.10	.20			.23
1.53A	251.20	.00	56.00	75.80	.42
1.53A	62.80	1.00	98.00	98.00	.00
1.53A	314.00	.20			.34
1.53B	8.64	.00	69.00	86.20	.29
1.53B	2.16	1.00	98.00	98.00	.00
1.53B	10.80	.20			.23
14.1	7.90	.00	91.00	98.20	.06
14.2	42.24	.00	91.00	98.20	.06
14.3	50.50	.00	91.00	98.20	.06
14.4A	8.10	.00	86.00	97.20	.11
14.4B	24.80	.00	91.00	98.20	.06
15.1	4.60	.00	91.00	98.20	.06
15.2	47.75	.00	91.00	98.20	.06
15.3A	9.20	.00	86.00	97.20	.11
15.3B	76.20	.00	91.00	98.20	.06
14.4C	3.10	.00	86.00	97.20	.11
14.4D	6.20	.00	91.00	98.20	.06
14.5A	42.30	.00	86.00	97.20	.11
14.5B	22.00	.00	91.00	98.20	.06
14.6A	78.10	.00	86.00	97.20	.11
14.6B	24.80	.00	91.00	98.20	.06
14.6C	2.80	.00	56.00	75.80	.42
14.6C	.70	1.00	98.00	98.00	.00
14.6C	3.50	.20			.34
14.7A	3.80	.00	86.00	97.20	.11
14.7B	1.44	.00	69.00	86.20	.29
14.7B	.36	1.00	98.00	98.00	.00
14.7B	1.80	.20			.23
14.7C	128.56	.00	56.00	75.80	.42

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
14.7C	32.14	1.00	98.00	98.00	.00
14.7C	160.70	.20			.34
14.8A	23.52	.00	56.00	75.80	.42
14.8A	5.88	1.00	98.00	98.00	.00
14.8A	29.40	.20			.34
18.1	8.87	.00	91.00	98.20	.06
18.2	42.30	.00	91.00	98.20	.06
18.3	66.00	.00	91.00	98.20	.06
18.4A	75.30	.00	91.00	98.20	.06
18.4B	9.04	.00	69.00	86.20	.29
18.4B	2.26	1.00	98.00	98.00	.00
18.4B	11.30	.20			.23
18.5A	133.68	.00	69.00	86.20	.29
18.5A	33.42	1.00	98.00	98.00	.00
18.5A	167.10	.20			.23
18.5B	29.40	.00	91.00	98.20	.06
18.5C	11.76	.00	56.00	75.80	.42
18.5C	2.94	1.00	98.00	98.00	.00
18.5C	14.70	.20			.34
14.8B	11.24	.00	56.00	75.80	.42
14.8B	2.81	1.00	98.00	98.00	.00
14.8B	14.05	.20			.34
13.8A	24.96	.00	56.00	75.80	.42
13.8A	6.24	1.00	98.00	98.00	.00
13.8A	31.20	.20			.34
13.1	5.20	.00	91.00	98.20	.06
13.2	26.60	.00	91.00	98.20	.06
13.3	33.98	.00	91.00	98.20	.06
13.4A	35.00	.00	86.00	97.20	.11
13.4B	109.30	.00	91.00	98.20	.06
13.5A	127.60	.00	86.00	97.20	.11
13.5B	19.25	.00	91.00	98.20	.06
13.6A	192.80	.00	91.00	98.20	.06
13.6B	64.30	.00	86.00	97.20	.11
13.7A	107.98	.00	56.00	75.80	.42
13.7A	27.00	1.00	98.00	98.00	.00
13.7A	134.98	.20			.34
13.7B	12.00	.00	86.00	97.20	.11
13.7C	22.00	.00	91.00	98.20	.06
13.8B	41.20	.00	56.00	75.80	.42
13.8B	10.30	1.00	98.00	98.00	.00
13.8B	51.50	.20			.34

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.9	102.16	.00	56.00	75.80	.42
13.9	25.54	1.00	98.00	98.00	.00
13.9	127.70	.20			.34
13.10A	70.56	.00	56.00	75.80	.42
13.10A	17.64	1.00	98.00	98.00	.00
13.10A	88.20	.20			.34
13.10B	22.80	.00	69.00	86.20	.29
13.10B	5.70	1.00	98.00	98.00	.00
13.10B	28.50	.20			.23
13.11	65.36	.00	69.00	86.20	.29
13.11	16.34	1.00	98.00	98.00	.00
13.11	81.70	.20			.23
13.12A	49.92	.00	56.00	75.80	.42
13.12A	12.48	1.00	98.00	98.00	.00
13.12A	62.40	.20			.34
13.12B	12.56	.00	69.00	86.20	.29
13.12B	3.14	1.00	98.00	98.00	.00
13.12B	15.70	.20			.23
131	3.36	.00	69.00	86.20	.29
131	.84	1.00	98.00	98.00	.00
131	4.20	.20			.23
132	24.98	.00	69.00	86.20	.29
132	6.24	1.00	98.00	98.00	.00
132	31.22	.20			.23
133A	7.36	.00	69.00	86.20	.29
133A	1.84	1.00	98.00	98.00	.00
133A	9.20	.20			.23
133B	45.52	.00	56.00	75.80	.42
133B	11.38	1.00	98.00	98.00	.00
133B	56.90	.20			.34
134A	132.24	.00	69.00	86.20	.29
134A	33.06	1.00	98.00	98.00	.00
134A	165.30	.20			.23
134B	72.72	.00	56.00	75.80	.42
134B	18.18	1.00	98.00	98.00	.00
134B	90.90	.20			.34
135A	205.60	.00	69.00	86.20	.29
135A	51.40	1.00	98.00	98.00	.00
135A	257.00	.20			.23
135B	47.04	.00	56.00	75.80	.42
135B	11.76	1.00	98.00	98.00	.00
135B	58.80	.20			.34

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.12C	16.88	.00	69.00	86.20	.29
13.12C	4.22	1.00	98.00	98.00	.00
13.12C	21.10	.20			.23
13.12D	14.16	.00	56.00	75.80	.42
13.12D	3.54	1.00	98.00	98.00	.00
13.12D	17.70	.20			.34
1.53C	14.16	.00	56.00	75.80	.42
1.53C	3.54	1.00	98.00	98.00	.00
1.53C	17.70	.20			.34
1.14B	152.08	.00	56.00	75.80	.42
1.14B	38.02	1.00	98.00	98.00	.00
1.14B	190.10	.20			.34
1.15	334.25	.00	56.00	75.80	.42
1.15	83.56	1.00	98.00	98.00	.00
1.15	417.81	.20			.34
1.16A	58.77	.00	56.00	75.80	.42
1.16A	14.69	1.00	98.00	98.00	.00
1.16A	73.46	.20			.34
1.16B	58.03	.00	69.00	86.20	.29
1.16B	14.51	1.00	98.00	98.00	.00
1.16B	72.54	.20			.23
19.1A	1.92	.00	56.00	75.80	.42
19.1A	.48	1.00	98.00	98.00	.00
19.1A	2.40	.20			.34
19.1B	5.12	.00	69.00	86.20	.29
19.1B	1.28	1.00	98.00	98.00	.00
19.1B	6.40	.20			.23
19.2	11.04	.00	56.00	75.80	.42
19.2	2.76	1.00	98.00	98.00	.00
19.2	13.80	.20			.34
19.3A	64.64	.00	56.00	75.80	.42
19.3A	16.16	1.00	98.00	98.00	.00
19.3A	80.80	.20			.34
19.3B	8.80	.00	69.00	86.20	.29
19.3B	2.20	1.00	98.00	98.00	.00
19.3B	11.00	.20			.23
19.4	174.80	.00	56.00	75.80	.42
19.4	43.70	1.00	98.00	98.00	.00
19.4	218.50	.20			.34
19.5	381.28	.00	56.00	75.80	.42
19.5	95.32	1.00	98.00	98.00	.00
19.5	476.60	.20			.34

WATERSHED 1, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.16

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
19.6	191.00	.00	56.00	75.80	.42
19.6	47.75	1.00	98.00	98.00	.00
19.6	238.75	.20			.34
19.7	93.28	.00	56.00	75.80	.42
19.7	23.32	1.00	98.00	98.00	.00
19.7	116.60	.20			.34
19.8A	586.96	.00	56.00	75.80	.42
19.8A	146.74	1.00	98.00	98.00	.00
19.8A	733.70	.20			.34
19.8B	16.64	.00	69.00	86.20	.29
19.8B	4.16	1.00	98.00	98.00	.00
19.8B	20.80	.20			.23
1.16C	250.48	.00	56.00	75.80	.42
1.16C	62.62	1.00	98.00	98.00	.00
1.16C	313.10	.20			.34
1.16D	220.40	.00	69.00	86.20	.29
1.16D	55.10	1.00	98.00	98.00	.00
1.16D	275.50	.20			.23

WATERSHED 1, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	14167.44
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.222
LOW LOSS FRACTION (Y BAR)	=	.252

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.01	10.00	.00	91.00
1.02A	24.80	.00	86.00
1.02B	18.00	.00	91.00
1.21	17.45	.00	91.00
1.22A	106.50	.00	91.00
1.22B	10.10	.00	86.00
1.02C	80.80	.00	86.00
1.02D	28.46	.00	91.00
1.31	10.00	.00	91.00
1.32A	37.64	.00	86.00
1.32B	9.18	.00	91.00
1.02E	57.85	.00	86.00
1.03A	76.20	.00	86.00
1.03B	15.60	.00	91.00
1.04	118.45	.00	86.00
1.05	85.39	.00	86.00
1.06A	22.95	.00	86.00
1.06B	60.60	.20	69.00
1.07	150.14	.20	69.00
1.08A	4.60	.20	56.00
1.08B	151.50	.20	69.00
1.09A	114.97	.20	56.00
1.09B	4.40	.20	69.00
1.71	4.28	.00	86.00
1.72	22.10	.00	86.00
1.73A	46.80	.00	86.00
1.73B	16.60	.20	69.00
1.74A	214.80	.20	69.00
1.74B	16.30	.00	91.00
1.74C	15.90	.00	86.00
1.75A	23.60	.20	56.00
1.75B	194.00	.20	69.00
1.76A	165.30	.20	56.00
1.76B	257.10	.20	69.00
1.09C	146.00	.20	56.00
1.10	194.67	.20	56.00
1.11	225.89	.20	56.00
1.12	310.37	.20	56.00
1.13	225.89	.20	56.00
1.14	78.05	.20	56.00
1.41	5.50	.00	91.00

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
1.42A	22.10	.00	86.00
1.42B	1.70	.00	91.00
1.43A	83.60	.00	86.00
1.43B	11.10	.00	91.00
1.44A	44.90	.00	86.00
1.44B	33.15	.00	91.00
1.45A	67.95	.00	86.00
1.45B	10.95	.00	91.00
1.81	9.80	.00	91.00
1.82A	33.90	.00	91.00
18.82B	6.43	.00	86.00
1.83	26.40	.00	91.00
1.91	12.85	.00	91.00
1.92	45.00	.00	91.00
1.83B	7.40	.00	91.00
1.84A	67.00	.00	91.00
121	9.18	.00	91.00
1.84B	68.80	.00	91.00
1.45C	126.70	.00	91.00
1.61	10.00	.00	86.00
1.62	106.92	.00	86.00
1.45D	65.19	.00	86.00
1.45E	2.76	.00	91.00
1.46A	47.75	.00	91.00
17.1	7.05	.00	91.00
17.2	75.30	.00	91.00
1.46B	107.40	.00	91.00
1.47A	15.60	.20	69.00
1.47B	101.00	.00	91.00
1.48A	22.95	.20	56.00
1.48B	122.10	.20	69.00
1.48C	47.75	.00	91.00
1.49A	125.00	.20	56.00
1.49B	17.95	.20	69.00
1.49C	15.90	.00	91.00
1.50	183.65	.00	91.00
1.51A	123.10	.20	56.00
10.1	10.00	.00	91.00
10.2	116.80	.00	91.00
10.3	158.00	.00	91.00
10.4A	81.70	.00	91.00

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
11.1	10.00	.00	91.00
11.2	40.60	.00	91.00
11.3	78.97	.00	91.00
10.4B	101.00	.00	91.00
10.5A	140.50	.00	91.00
12.1	6.90	.00	91.00
12.2	18.40	.00	91.00
12.3	40.40	.00	91.00
12.4	44.50	.00	91.00
10.5B	97.30	.00	91.00
10.6A	86.30	.00	91.00
16.1	7.10	.00	91.00
16.2	26.60	.00	91.00
16.3	44.10	.00	91.00
10.6B	58.30	.00	91.00
10.7A	14.70	.20	56.00
10.7B	34.90	.20	69.00
10.7C	176.30	.00	91.00
10.8A	83.56	.20	56.00
10.8B	74.40	.20	69.00
10.9A	140.90	.20	56.00
10.9B	70.30	.20	91.00
1.51B	68.80	.20	56.00
1.51C	68.80	.20	69.00
1.52A	262.60	.20	56.00
1.52B	77.10	.20	69.00
1.53A	314.00	.20	56.00
1.53B	10.80	.20	69.00
14.1	7.90	.00	91.00
14.2	42.24	.00	91.00
14.3	50.50	.00	91.00
14.4A	8.10	.00	86.00
14.4B	24.80	.00	91.00
15.1	4.60	.00	91.00
15.2	47.75	.00	91.00
15.3A	9.20	.00	86.00
15.3B	76.20	.00	91.00
14.4C	3.10	.00	86.00
14.4D	6.20	.00	91.00
14.5A	42.30	.00	86.00
14.5B	22.00	.00	91.00

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
14.6A	78.10	.00	86.00
14.6B	24.80	.00	91.00
14.6C	3.50	.20	56.00
14.7A	3.80	.00	86.00
14.7B	1.80	.20	69.00
14.7C	160.70	.20	56.00
14.8A	29.40	.20	56.00
18.1	8.87	.00	91.00
18.2	42.30	.00	91.00
18.3	66.00	.00	91.00
18.4A	75.30	.00	91.00
18.4B	11.30	.20	69.00
18.5A	167.10	.20	69.00
18.5B	29.40	.00	91.00
18.5C	14.70	.20	56.00
14.8B	14.05	.20	56.00
13.8A	31.20	.20	56.00
13.1	5.20	.00	91.00
13.2	26.60	.00	91.00
13.3	33.98	.00	91.00
13.4A	35.00	.00	86.00
13.4B	109.30	.00	91.00
13.5A	127.60	.00	86.00
13.5B	19.25	.00	91.00
13.6A	192.80	.00	91.00
13.6B	64.30	.00	86.00
13.7A	134.98	.20	56.00
13.7B	12.00	.00	86.00
13.7C	22.00	.00	91.00
13.8B	51.50	.20	56.00
13.9	127.70	.20	56.00
13.10A	88.20	.20	56.00
13.10B	28.50	.20	69.00
13.11	81.70	.20	69.00
13.12A	62.40	.20	56.00
13.12B	15.70	.20	69.00
131	4.20	.20	69.00
132	31.22	.20	69.00
133A	9.20	.20	69.00
133B	56.90	.20	56.00
134A	165.30	.20	69.00

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
134B	90.90	.20	56.00
135A	257.00	.20	69.00
135B	58.80	.20	56.00
13.12C	21.10	.20	69.00
13.12D	17.70	.20	56.00
1.53C	17.70	.20	56.00
1.14B	190.10	.20	56.00
1.15	417.81	.20	56.00
1.16A	73.46	.20	56.00
1.16B	72.54	.20	69.00
19.1A	2.40	.20	56.00
19.1B	6.40	.20	69.00
19.2	13.80	.20	56.00
19.3A	80.80	.20	56.00
19.3B	11.00	.20	69.00
19.4	218.50	.20	56.00
19.5	476.60	.20	56.00
19.6	238.75	.20	56.00
19.7	116.60	.20	56.00
19.8A	733.70	.20	56.00
19.8B	20.80	.20	69.00
1.16C	313.10	.20	56.00
1.16D	275.50	.20	69.00
117A	36.00	.90	69.00
117B	142.30	.30	56.00
117C	5.30	.90	69.00
117D	133.14	.30	56.00

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.01	10.00	.00	91.00	98.20	.06
1.02A	24.80	.00	86.00	97.20	.11
1.02B	18.00	.00	91.00	98.20	.06
1.21	17.45	.00	91.00	98.20	.06
1.22A	106.50	.00	91.00	98.20	.06
1.22B	10.10	.00	86.00	97.20	.11
1.02C	80.80	.00	86.00	97.20	.11
1.02D	28.46	.00	91.00	98.20	.06
1.31	10.00	.00	91.00	98.20	.06
1.32A	37.64	.00	86.00	97.20	.11
1.32B	9.18	.00	91.00	98.20	.06
1.02E	57.85	.00	86.00	97.20	.11
1.03A	76.20	.00	86.00	97.20	.11
1.03B	15.60	.00	91.00	98.20	.06
1.04	118.45	.00	86.00	97.20	.11
1.05	85.39	.00	86.00	97.20	.11
1.06A	22.95	.00	86.00	97.20	.11
1.06B	48.48	.00	69.00	86.20	.29
1.06B	12.12	1.00	98.00	98.00	.00
1.06B	60.60	.20			.23
1.07	120.11	.00	69.00	86.20	.29
1.07	30.03	1.00	98.00	98.00	.00
1.07	150.14	.20			.23
1.08A	3.68	.00	56.00	75.80	.42
1.08A	.92	1.00	98.00	98.00	.00
1.08A	4.60	.20			.34
1.08B	121.20	.00	69.00	86.20	.29
1.08B	30.30	1.00	98.00	98.00	.00
1.08B	151.50	.20			.23
1.09A	91.98	.00	56.00	75.80	.42
1.09A	22.99	1.00	98.00	98.00	.00
1.09A	114.97	.20			.34
1.09B	3.52	.00	69.00	86.20	.29
1.09B	.88	1.00	98.00	98.00	.00
1.09B	4.40	.20			.23
1.71	4.28	.00	86.00	97.20	.11
1.72	22.10	.00	86.00	97.20	.11
1.73A	46.80	.00	86.00	97.20	.11
1.73B	13.28	.00	69.00	86.20	.29
1.73B	3.32	1.00	98.00	98.00	.00
1.73B	16.60	.20			.23

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.74A	171.84	.00	69.00	86.20	.29
1.74A	42.96	1.00	98.00	98.00	.00
1.74A	214.80	.20			.23
1.74B	16.30	.00	91.00	98.20	.06
1.74C	15.90	.00	86.00	97.20	.11
1.75A	18.88	.00	56.00	75.80	.42
1.75A	4.72	1.00	98.00	98.00	.00
1.75A	23.60	.20			.34
1.75B	155.20	.00	69.00	86.20	.29
1.75B	38.80	1.00	98.00	98.00	.00
1.75B	194.00	.20			.23
1.76A	132.24	.00	56.00	75.80	.42
1.76A	33.06	1.00	98.00	98.00	.00
1.76A	165.30	.20			.34
1.76B	205.68	.00	69.00	86.20	.29
1.76B	51.42	1.00	98.00	98.00	.00
1.76B	257.10	.20			.23
1.09C	116.80	.00	56.00	75.80	.42
1.09C	29.20	1.00	98.00	98.00	.00
1.09C	146.00	.20			.34
1.10	155.74	.00	56.00	75.80	.42
1.10	38.93	1.00	98.00	98.00	.00
1.10	194.67	.20			.34
1.11	180.71	.00	56.00	75.80	.42
1.11	45.18	1.00	98.00	98.00	.00
1.11	225.89	.20			.34
1.12	248.30	.00	56.00	75.80	.42
1.12	62.07	1.00	98.00	98.00	.00
1.12	310.37	.20			.34
1.13	180.71	.00	56.00	75.80	.42
1.13	45.18	1.00	98.00	98.00	.00
1.13	225.89	.20			.34
1.14	62.44	.00	56.00	75.80	.42
1.14	15.61	1.00	98.00	98.00	.00
1.14	78.05	.20			.34
1.41	5.50	.00	91.00	98.20	.06
1.42A	22.10	.00	86.00	97.20	.11
1.42B	1.70	.00	91.00	98.20	.06
1.43A	83.60	.00	86.00	97.20	.11
1.43B	11.10	.00	91.00	98.20	.06
1.44A	44.90	.00	86.00	97.20	.11

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.44B	33.15	.00	91.00	98.20	.06
1.45A	67.95	.00	86.00	97.20	.11
1.45B	10.95	.00	91.00	98.20	.06
1.81	9.80	.00	91.00	98.20	.06
1.82A	33.90	.00	91.00	98.20	.06
18.82B	6.43	.00	86.00	97.20	.11
1.83	26.40	.00	91.00	98.20	.06
1.91	12.85	.00	91.00	98.20	.06
1.92	45.00	.00	91.00	98.20	.06
1.83B	7.40	.00	91.00	98.20	.06
1.84A	67.00	.00	91.00	98.20	.06
121	9.18	.00	91.00	98.20	.06
1.84B	68.80	.00	91.00	98.20	.06
1.45C	126.70	.00	91.00	98.20	.06
1.61	10.00	.00	86.00	97.20	.11
1.62	106.92	.00	86.00	97.20	.11
1.45D	65.19	.00	86.00	97.20	.11
1.45E	2.76	.00	91.00	98.20	.06
1.46A	47.75	.00	91.00	98.20	.06
17.1	7.05	.00	91.00	98.20	.06
17.2	75.30	.00	91.00	98.20	.06
1.46B	107.40	.00	91.00	98.20	.06
1.47A	12.48	.00	69.00	86.20	.29
1.47A	3.12	1.00	98.00	98.00	.00
1.47A	15.60	.20			.23
1.47B	101.00	.00	91.00	98.20	.06
1.48A	18.36	.00	56.00	75.80	.42
1.48A	4.59	1.00	98.00	98.00	.00
1.48A	22.95	.20			.34
1.48B	97.68	.00	69.00	86.20	.29
1.48B	24.42	1.00	98.00	98.00	.00
1.48B	122.10	.20			.23
1.48C	47.75	.00	91.00	98.20	.06
1.49A	100.00	.00	56.00	75.80	.42
1.49A	25.00	1.00	98.00	98.00	.00
1.49A	125.00	.20			.34
1.49B	14.36	.00	69.00	86.20	.29
1.49B	3.59	1.00	98.00	98.00	.00
1.49B	17.95	.20			.23
1.49C	15.90	.00	91.00	98.20	.06
1.50	183.65	.00	91.00	98.20	.06

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51A	98.48	.00	56.00	75.80	.42
1.51A	24.62	1.00	98.00	98.00	.00
1.51A	123.10	.20			.34
10.1	10.00	.00	91.00	98.20	.06
10.2	116.80	.00	91.00	98.20	.06
10.3	158.00	.00	91.00	98.20	.06
10.4A	81.70	.00	91.00	98.20	.06
11.1	10.00	.00	91.00	98.20	.06
11.2	40.60	.00	91.00	98.20	.06
11.3	78.97	.00	91.00	98.20	.06
10.4B	101.00	.00	91.00	98.20	.06
10.5A	140.50	.00	91.00	98.20	.06
12.1	6.90	.00	91.00	98.20	.06
12.2	18.40	.00	91.00	98.20	.06
12.3	40.40	.00	91.00	98.20	.06
12.4	44.50	.00	91.00	98.20	.06
10.5B	97.30	.00	91.00	98.20	.06
10.6A	86.30	.00	91.00	98.20	.06
16.1	7.10	.00	91.00	98.20	.06
16.2	26.60	.00	91.00	98.20	.06
16.3	44.10	.00	91.00	98.20	.06
10.6B	58.30	.00	91.00	98.20	.06
10.7A	11.76	.00	56.00	75.80	.42
10.7A	2.94	1.00	98.00	98.00	.00
10.7A	14.70	.20			.34
10.7B	27.92	.00	69.00	86.20	.29
10.7B	6.98	1.00	98.00	98.00	.00
10.7B	34.90	.20			.23
10.7C	176.30	.00	91.00	98.20	.06
10.8A	66.85	.00	56.00	75.80	.42
10.8A	16.71	1.00	98.00	98.00	.00
10.8A	83.56	.20			.34
10.8B	59.52	.00	69.00	86.20	.29
10.8B	14.88	1.00	98.00	98.00	.00
10.8B	74.40	.20			.23
10.9A	112.72	.00	56.00	75.80	.42
10.9A	28.18	1.00	98.00	98.00	.00
10.9A	140.90	.20			.34
10.9B	56.24	.00	91.00	98.20	.06
10.9B	14.06	1.00	98.00	98.00	.00
10.9B	70.30	.20			.05

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
1.51B	55.04	.00	56.00	75.80	.42
1.51B	13.76	1.00	98.00	98.00	.00
1.51B	68.80	.20			.34
1.51C	55.04	.00	69.00	86.20	.29
1.51C	13.76	1.00	98.00	98.00	.00
1.51C	68.80	.20			.23
1.52A	210.08	.00	56.00	75.80	.42
1.52A	52.52	1.00	98.00	98.00	.00
1.52A	262.60	.20			.34
1.52B	61.68	.00	69.00	86.20	.29
1.52B	15.42	1.00	98.00	98.00	.00
1.52B	77.10	.20			.23
1.53A	251.20	.00	56.00	75.80	.42
1.53A	62.80	1.00	98.00	98.00	.00
1.53A	314.00	.20			.34
1.53B	8.64	.00	69.00	86.20	.29
1.53B	2.16	1.00	98.00	98.00	.00
1.53B	10.80	.20			.23
14.1	7.90	.00	91.00	98.20	.06
14.2	42.24	.00	91.00	98.20	.06
14.3	50.50	.00	91.00	98.20	.06
14.4A	8.10	.00	86.00	97.20	.11
14.4B	24.80	.00	91.00	98.20	.06
15.1	4.60	.00	91.00	98.20	.06
15.2	47.75	.00	91.00	98.20	.06
15.3A	9.20	.00	86.00	97.20	.11
15.3B	76.20	.00	91.00	98.20	.06
14.4C	3.10	.00	86.00	97.20	.11
14.4D	6.20	.00	91.00	98.20	.06
14.5A	42.30	.00	86.00	97.20	.11
14.5B	22.00	.00	91.00	98.20	.06
14.6A	78.10	.00	86.00	97.20	.11
14.6B	24.80	.00	91.00	98.20	.06
14.6C	2.80	.00	56.00	75.80	.42
14.6C	.70	1.00	98.00	98.00	.00
14.6C	3.50	.20			.34
14.7A	3.80	.00	86.00	97.20	.11
14.7B	1.44	.00	69.00	86.20	.29
14.7B	.36	1.00	98.00	98.00	.00
14.7B	1.80	.20			.23
14.7C	128.56	.00	56.00	75.80	.42

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
14.7C	32.14	1.00	98.00	98.00	.00
14.7C	160.70	.20			.34
14.8A	23.52	.00	56.00	75.80	.42
14.8A	5.88	1.00	98.00	98.00	.00
14.8A	29.40	.20			.34
18.1	8.87	.00	91.00	98.20	.06
18.2	42.30	.00	91.00	98.20	.06
18.3	66.00	.00	91.00	98.20	.06
18.4A	75.30	.00	91.00	98.20	.06
18.4B	9.04	.00	69.00	86.20	.29
18.4B	2.26	1.00	98.00	98.00	.00
18.4B	11.30	.20			.23
18.5A	133.68	.00	69.00	86.20	.29
18.5A	33.42	1.00	98.00	98.00	.00
18.5A	167.10	.20			.23
18.5B	29.40	.00	91.00	98.20	.06
18.5C	11.76	.00	56.00	75.80	.42
18.5C	2.94	1.00	98.00	98.00	.00
18.5C	14.70	.20			.34
14.8B	11.24	.00	56.00	75.80	.42
14.8B	2.81	1.00	98.00	98.00	.00
14.8B	14.05	.20			.34
13.8A	24.96	.00	56.00	75.80	.42
13.8A	6.24	1.00	98.00	98.00	.00
13.8A	31.20	.20			.34
13.1	5.20	.00	91.00	98.20	.06
13.2	26.60	.00	91.00	98.20	.06
13.3	33.98	.00	91.00	98.20	.06
13.4A	35.00	.00	86.00	97.20	.11
13.4B	109.30	.00	91.00	98.20	.06
13.5A	127.60	.00	86.00	97.20	.11
13.5B	19.25	.00	91.00	98.20	.06
13.6A	192.80	.00	91.00	98.20	.06
13.6B	64.30	.00	86.00	97.20	.11
13.7A	107.98	.00	56.00	75.80	.42
13.7A	27.00	1.00	98.00	98.00	.00
13.7A	134.98	.20			.34
13.7B	12.00	.00	86.00	97.20	.11
13.7C	22.00	.00	91.00	98.20	.06
13.8B	41.20	.00	56.00	75.80	.42
13.8B	10.30	1.00	98.00	98.00	.00
13.8B	51.50	.20			.34

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.9	102.16	.00	56.00	75.80	.42
13.9	25.54	1.00	98.00	98.00	.00
13.9	127.70	.20			.34
13.10A	70.56	.00	56.00	75.80	.42
13.10A	17.64	1.00	98.00	98.00	.00
13.10A	88.20	.20			.34
13.10B	22.80	.00	69.00	86.20	.29
13.10B	5.70	1.00	98.00	98.00	.00
13.10B	28.50	.20			.23
13.11	65.36	.00	69.00	86.20	.29
13.11	16.34	1.00	98.00	98.00	.00
13.11	81.70	.20			.23
13.12A	49.92	.00	56.00	75.80	.42
13.12A	12.48	1.00	98.00	98.00	.00
13.12A	62.40	.20			.34
13.12B	12.56	.00	69.00	86.20	.29
13.12B	3.14	1.00	98.00	98.00	.00
13.12B	15.70	.20			.23
131	3.36	.00	69.00	86.20	.29
131	.84	1.00	98.00	98.00	.00
131	4.20	.20			.23
132	24.98	.00	69.00	86.20	.29
132	6.24	1.00	98.00	98.00	.00
132	31.22	.20			.23
133A	7.36	.00	69.00	86.20	.29
133A	1.84	1.00	98.00	98.00	.00
133A	9.20	.20			.23
133B	45.52	.00	56.00	75.80	.42
133B	11.38	1.00	98.00	98.00	.00
133B	56.90	.20			.34
134A	132.24	.00	69.00	86.20	.29
134A	33.06	1.00	98.00	98.00	.00
134A	165.30	.20			.23
134B	72.72	.00	56.00	75.80	.42
134B	18.18	1.00	98.00	98.00	.00
134B	90.90	.20			.34
135A	205.60	.00	69.00	86.20	.29
135A	51.40	1.00	98.00	98.00	.00
135A	257.00	.20			.23
135B	47.04	.00	56.00	75.80	.42
135B	11.76	1.00	98.00	98.00	.00
135B	58.80	.20			.34

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
13.12C	16.88	.00	69.00	86.20	.29
13.12C	4.22	1.00	98.00	98.00	.00
13.12C	21.10	.20			.23
13.12D	14.16	.00	56.00	75.80	.42
13.12D	3.54	1.00	98.00	98.00	.00
13.12D	17.70	.20			.34
1.53C	14.16	.00	56.00	75.80	.42
1.53C	3.54	1.00	98.00	98.00	.00
1.53C	17.70	.20			.34
1.14B	152.08	.00	56.00	75.80	.42
1.14B	38.02	1.00	98.00	98.00	.00
1.14B	190.10	.20			.34
1.15	334.25	.00	56.00	75.80	.42
1.15	83.56	1.00	98.00	98.00	.00
1.15	417.81	.20			.34
1.16A	58.77	.00	56.00	75.80	.42
1.16A	14.69	1.00	98.00	98.00	.00
1.16A	73.46	.20			.34
1.16B	58.03	.00	69.00	86.20	.29
1.16B	14.51	1.00	98.00	98.00	.00
1.16B	72.54	.20			.23
19.1A	1.92	.00	56.00	75.80	.42
19.1A	.48	1.00	98.00	98.00	.00
19.1A	2.40	.20			.34
19.1B	5.12	.00	69.00	86.20	.29
19.1B	1.28	1.00	98.00	98.00	.00
19.1B	6.40	.20			.23
19.2	11.04	.00	56.00	75.80	.42
19.2	2.76	1.00	98.00	98.00	.00
19.2	13.80	.20			.34
19.3A	64.64	.00	56.00	75.80	.42
19.3A	16.16	1.00	98.00	98.00	.00
19.3A	80.80	.20			.34
19.3B	8.80	.00	69.00	86.20	.29
19.3B	2.20	1.00	98.00	98.00	.00
19.3B	11.00	.20			.23
19.4	174.80	.00	56.00	75.80	.42
19.4	43.70	1.00	98.00	98.00	.00
19.4	218.50	.20			.34
19.5	381.28	.00	56.00	75.80	.42
19.5	95.32	1.00	98.00	98.00	.00
19.5	476.60	.20			.34

WATERSHED 1 , DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
19.6	191.00	.00	56.00	75.80	.42
19.6	47.75	1.00	98.00	98.00	.00
19.6	238.75	.20			.34
19.7	93.28	.00	56.00	75.80	.42
19.7	23.32	1.00	98.00	98.00	.00
19.7	116.60	.20			.34
19.8A	586.96	.00	56.00	75.80	.42
19.8A	146.74	1.00	98.00	98.00	.00
19.8A	733.70	.20			.34
19.8B	16.64	.00	69.00	86.20	.29
19.8B	4.16	1.00	98.00	98.00	.00
19.8B	20.80	.20			.23
1.16C	250.48	.00	56.00	75.80	.42
1.16C	62.62	1.00	98.00	98.00	.00
1.16C	313.10	.20			.34
1.16D	220.40	.00	69.00	86.20	.29
1.16D	55.10	1.00	98.00	98.00	.00
1.16D	275.50	.20			.23
117A	3.60	.00	69.00	86.20	.29
117A	32.40	1.00	98.00	98.00	.00
117A	36.00	.90			.03
117B	99.61	.00	56.00	75.80	.42
117B	42.69	1.00	98.00	98.00	.00
117B	142.30	.30			.29
117C	.53	.00	69.00	86.20	.29
117C	4.77	1.00	98.00	98.00	.00
117C	5.30	.90			.03
117D	93.20	.00	56.00	75.80	.42
117D	39.94	1.00	98.00	98.00	.00
117D	133.14	.30			.29

WATERSHED 1 , DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	14484.18
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.223
LOW LOSS FRACTION (Y BAR)	=	.254

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18

WATERSHED 2, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	789.50
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.304
LOW LOSS FRACTION (Y BAR)	=	.327

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23

WATERSHED 2, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	1529.30
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.332
LOW LOSS FRACTION (Y BAR)	=	.369

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE-2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.11

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

WATERSHED 2, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	4047.60
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.242
LOW LOSS FRACTION (Y BAR)	=	.264

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00
212A	267.30	.20	56.00
212B	153.30	.20	69.00
213A	28.10	.20	56.00
213B	14.10	.20	69.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE-2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
212A	213.84	.00	56.00	75.80	.42
212A	53.46	1.00	98.00	98.00	.00
212A	267.30	.20			.34
212B	122.64	.00	69.00	86.20	.29
212B	30.66	1.00	98.00	98.00	.00
212B	153.30	.20			.23
213A	22.48	.00	56.00	75.80	.42
213A	5.62	1.00	98.00	98.00	.00
213A	28.10	.20			.34
213B	11.28	.00	69.00	86.20	.29
213B	2.82	1.00	98.00	98.00	.00
213B	14.10	.20			.23

WATERSHED 2, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	4510.40
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.248
LOW LOSS FRACTION (Y BAR)	=	.274

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00
212A	267.30	.20	56.00
212B	153.30	.20	69.00
213A	28.10	.20	56.00
213B	14.10	.20	69.00
214	63.40	.20	56.00
215A	106.50	.20	56.00
21	5.50	.20	56.00
22A	23.90	.20	56.00
22B	11.00	.20	69.00
23	20.30	.20	56.00
23B	66.00	.20	69.00
24	202.10	.20	69.00
25	81.70	.20	69.00
26A	62.20	.20	56.00
26B	89.30	.20	69.00
215B	7.30	.20	69.00
215C	83.60	.20	56.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
212A	213.84	.00	56.00	75.80	.42
212A	53.46	1.00	98.00	98.00	.00
212A	267.30	.20			.34
212B	122.64	.00	69.00	86.20	.29
212B	30.66	1.00	98.00	98.00	.00
212B	153.30	.20			.23
213A	22.48	.00	56.00	75.80	.42
213A	5.62	1.00	98.00	98.00	.00
213A	28.10	.20			.34
213B	11.28	.00	69.00	86.20	.29
213B	2.82	1.00	98.00	98.00	.00
213B	14.10	.20			.23
214	50.72	.00	56.00	75.80	.42
214	12.68	1.00	98.00	98.00	.00
214	63.40	.20			.34
215A	85.20	.00	56.00	75.80	.42
215A	21.30	1.00	98.00	98.00	.00
215A	106.50	.20			.34
21	4.40	.00	56.00	75.80	.42
21	1.10	1.00	98.00	98.00	.00
21	5.50	.20			.34
22A	19.12	.00	56.00	75.80	.42
22A	4.78	1.00	98.00	98.00	.00
22A	23.90	.20			.34
22B	8.80	.00	69.00	86.20	.29
22B	2.20	1.00	98.00	98.00	.00
22B	11.00	.20			.23
23	16.24	.00	56.00	75.80	.42
23	4.06	1.00	98.00	98.00	.00
23	20.30	.20			.34
23B	52.80	.00	69.00	86.20	.29
23B	13.20	1.00	98.00	98.00	.00
23B	66.00	.20			.23
24	161.68	.00	69.00	86.20	.29
24	40.42	1.00	98.00	98.00	.00
24	202.10	.20			.23
25	65.36	.00	69.00	86.20	.29
25	16.34	1.00	98.00	98.00	.00
25	81.70	.20			.23
26A	49.76	.00	56.00	75.80	.42
26A	12.44	1.00	98.00	98.00	.00
26A	62.20	.20			.34

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.15

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
26B	71.44	.00	69.00	86.20	.29
26B	17.86	1.00	98.00	98.00	.00
26B	89.30	.20			.23
215B	5.84	.00	69.00	86.20	.29
215B	1.46	1.00	98.00	98.00	.00
215B	7.30	.20			.23
215C	66.88	.00	56.00	75.80	.42
215C	16.72	1.00	98.00	98.00	.00
215C	83.60	.20			.34

WATERSHED 2, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	5333.20
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.252
LOW LOSS FRACTION (Y BAR)	=	.281

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00
212A	267.30	.20	56.00
212B	153.30	.20	69.00
213A	28.10	.20	56.00
213B	14.10	.20	69.00
214	63.40	.20	56.00
215A	106.50	.20	56.00
21	5.50	.20	56.00
22A	23.90	.20	56.00
22B	11.00	.20	69.00
23	20.30	.20	56.00
23B	66.00	.20	69.00
24	202.10	.20	69.00
25	81.70	.20	69.00
26A	62.20	.20	56.00
26B	89.30	.20	69.00
215B	7.30	.20	69.00
215C	83.60	.20	56.00
216	78.80	.20	56.00
217A	68.00	.20	56.00
217B	44.10	.20	69.00
281	3.00	.00	86.00
282	12.20	.00	86.00
283	51.90	.00	86.00
284A	63.30	.00	86.00
284B	10.70	.00	91.00
284C	11.40	.20	69.00
284D	169.00	.00	86.00
285A	6.40	.00	91.00

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
212A	213.84	.00	56.00	75.80	.42
212A	53.46	1.00	98.00	98.00	.00
212A	267.30	.20			.34
212B	122.64	.00	69.00	86.20	.29
212B	30.66	1.00	98.00	98.00	.00
212B	153.30	.20			.23
213A	22.48	.00	56.00	75.80	.42
213A	5.62	1.00	98.00	98.00	.00
213A	28.10	.20			.34
213B	11.28	.00	69.00	86.20	.29
213B	2.82	1.00	98.00	98.00	.00
213B	14.10	.20			.23
214	50.72	.00	56.00	75.80	.42
214	12.68	1.00	98.00	98.00	.00
214	63.40	.20			.34
215A	85.20	.00	56.00	75.80	.42
215A	21.30	1.00	98.00	98.00	.00
215A	106.50	.20			.34
21	4.40	.00	56.00	75.80	.42
21	1.10	1.00	98.00	98.00	.00
21	5.50	.20			.34
22A	19.12	.00	56.00	75.80	.42
22A	4.78	1.00	98.00	98.00	.00
22A	23.90	.20			.34
22B	8.80	.00	69.00	86.20	.29
22B	2.20	1.00	98.00	98.00	.00
22B	11.00	.20			.23
23	16.24	.00	56.00	75.80	.42
23	4.06	1.00	98.00	98.00	.00
23	20.30	.20			.34
23B	52.80	.00	69.00	86.20	.29
23B	13.20	1.00	98.00	98.00	.00
23B	66.00	.20			.23
24	161.68	.00	69.00	86.20	.29
24	40.42	1.00	98.00	98.00	.00
24	202.10	.20			.23
25	65.36	.00	69.00	86.20	.29
25	16.34	1.00	98.00	98.00	.00
25	81.70	.20			.23
26A	49.76	.00	56.00	75.80	.42
26A	12.44	1.00	98.00	98.00	.00
26A	62.20	.20			.34

WATERSHED 2, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 2.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
26B	71.44	.00	69.00	86.20	.29
26B	17.86	1.00	98.00	98.00	.00
26B	89.30	.20			.23
215B	5.84	.00	69.00	86.20	.29
215B	1.46	1.00	98.00	98.00	.00
215B	7.30	.20			.23
215C	66.88	.00	56.00	75.80	.42
215C	16.72	1.00	98.00	98.00	.00
215C	83.60	.20			.34
216	63.04	.00	56.00	75.80	.42
216	15.76	1.00	98.00	98.00	.00
216	78.80	.20			.34
217A	54.40	.00	56.00	75.80	.42
217A	13.60	1.00	98.00	98.00	.00
217A	68.00	.20			.34
217B	35.28	.00	69.00	86.20	.29
217B	8.82	1.00	98.00	98.00	.00
217B	44.10	.20			.23
281	3.00	.00	86.00	97.20	.11
282	12.20	.00	86.00	97.20	.11
283	51.90	.00	86.00	97.20	.11
284A	63.30	.00	86.00	97.20	.11
284B	10.70	.00	91.00	98.20	.06
284C	9.12	.00	69.00	86.20	.29
284C	2.28	1.00	98.00	98.00	.00
284C	11.40	.20			.23
284D	169.00	.00	86.00	97.20	.11
285A	6.40	.00	91.00	98.20	.06

WATERSHED 2, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	5852.00
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.246
LOW LOSS FRACTION (Y BAR)	=	.272

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
201	5.20	.00	91.00
202	34.00	.00	91.00
203A	27.50	.00	91.00
203B	12.90	.00	78.00
204A	6.00	.00	91.00
204B	40.80	.00	78.00
205A	156.10	.00	78.00
205B	27.60	.20	32.00
205C	32.10	.00	91.00
206A	49.50	.00	78.00
206B	89.10	.20	32.00
206C	4.20	.00	91.00
207A	150.60	.20	32.00
207B	33.00	.20	69.00
221	4.30	.00	91.00
222A	44.80	.00	78.00
222B	2.00	.00	91.00
204	69.80	.00	78.00
208A	10.10	.20	69.00
208B	88.20	.20	32.00
209A	35.00	.20	32.00
209B	50.40	.20	56.00
209C	35.30	.20	69.00
261	4.20	.00	78.00
262A	13.80	.00	78.00
262B	28.40	.20	32.00
263A	8.20	.00	78.00
263B	36.70	.20	32.00
263C	46.90	.20	69.00
264A	3.50	.20	32.00
264B	88.80	.20	69.00
265A	36.00	.20	32.00
265B	70.60	.20	69.00
209D	20.00	.20	32.00
209E	40.10	.20	56.00
209F	123.60	.20	69.00
210	72.40	.20	56.00
291A	5.10	.00	78.00
291B	4.90	.20	32.00
292A	10.00	.20	32.00
292B	36.80	.20	69.00

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
293	93.60	.20	69.00
294	96.40	.20	69.00
295A	89.00	.20	56.00
295B	128.60	.20	69.00
210B	65.20	.20	56.00
211A	176.30	.20	56.00
231	8.80	.00	91.00
232	18.90	.00	91.00
233	36.70	.00	91.00
234	73.00	.00	91.00
235A	4.50	.00	78.00
235B	62.00	.00	91.00
241	10.00	.00	91.00
242	76.60	.00	91.00
243A	93.80	.00	91.00
243B	2.00	.00	86.00
233A	2.00	.00	86.00
233B	83.50	.00	91.00
201A	2.40	.00	86.00
201B	2.00	.00	91.00
202A	4.30	.00	86.00
202B	32.10	.00	91.00
235	38.60	.00	86.00
236A	2.20	.00	91.00
236B	9.80	.00	78.00
2.71	4.20	.00	86.00
272	24.20	.00	86.00
273A	28.70	.00	86.00
273B	8.70	.00	91.00
236	53.30	.00	91.00
237	2.00	.00	78.00
237B	36.30	.00	91.00
237C	63.40	.20	69.00
251	4.20	.00	91.00
252	8.10	.00	91.00
253A	55.10	.00	86.00
253B	13.70	.00	91.00
254	34.90	.00	86.00
255A	47.70	.00	86.00
255B	19.40	.00	91.00
230	3.00	.00	91.00

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
240A	5.00	.00	86.00
240B	11.00	.00	91.00
250A	26.60	.00	86.00
250B	1.00	.00	91.00
260	49.60	.00	86.00
255A	22.10	.00	86.00
255B	43.10	.00	91.00
237A	17.00	.00	91.00
237B	72.00	.20	69.00
238	129.50	.20	69.00
239	94.60	.20	69.00
211A	106.50	.20	56.00
211B	191.90	.20	69.00
212A	267.30	.20	56.00
212B	153.30	.20	69.00
213A	28.10	.20	56.00
213B	14.10	.20	69.00
214	63.40	.20	56.00
215A	106.50	.20	56.00
21	5.50	.20	56.00
22A	23.90	.20	56.00
22B	11.00	.20	69.00
23	20.30	.20	56.00
23B	66.00	.20	69.00
24	202.10	.20	69.00
25	81.70	.20	69.00
26A	62.20	.20	56.00
26B	89.30	.20	69.00
215B	7.30	.20	69.00
215C	83.60	.20	56.00
216	78.80	.20	56.00
217A	68.00	.20	56.00
217B	44.10	.20	69.00
281	3.00	.00	86.00
282	12.20	.00	86.00
283	51.90	.00	86.00
284A	63.30	.00	86.00
284B	10.70	.00	91.00
284C	11.40	.20	69.00
284D	169.00	.00	86.00
285A	6.40	.00	91.00

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
285B	92.80	.20	69.00
286A	16.50	.00	86.00
286B	720.00	.20	69.00
287A	154.70	.20	56.00
287B	40.20	.20	69.00
288	316.80	.20	56.00
289	258.90	.20	56.00
217A	202.10	.20	56.00
217B	18.20	.20	69.00
117A	75.60	.30	56.00
117B	68.90	.30	69.00
117C	6.10	.15	65.00

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
201	5.20	.00	91.00	98.20	.06
202	34.00	.00	91.00	98.20	.06
203A	27.50	.00	91.00	98.20	.06
203B	12.90	.00	78.00	92.80	.18
204A	6.00	.00	91.00	98.20	.06
204B	40.80	.00	78.00	92.80	.18
205A	156.10	.00	78.00	92.80	.18
205B	22.08	.00	32.00	52.00	.74
205B	5.52	1.00	98.00	98.00	.00
205B	27.60	.20			.59
205C	32.10	.00	91.00	98.20	.06
206A	49.50	.00	78.00	92.80	.18
206B	71.28	.00	32.00	52.00	.74
206B	17.82	1.00	98.00	98.00	.00
206B	89.10	.20			.59
206C	4.20	.00	91.00	98.20	.06
207A	120.48	.00	32.00	52.00	.74
207A	30.12	1.00	98.00	98.00	.00
207A	150.60	.20			.59
207B	26.40	.00	69.00	86.20	.29
207B	6.60	1.00	98.00	98.00	.00
207B	33.00	.20			.23
221	4.30	.00	91.00	98.20	.06
222A	44.80	.00	78.00	92.80	.18
222B	2.00	.00	91.00	98.20	.06
204	69.80	.00	78.00	92.80	.18
208A	8.08	.00	69.00	86.20	.29
208A	2.02	1.00	98.00	98.00	.00
208A	10.10	.20			.23
208B	70.56	.00	32.00	52.00	.74
208B	17.64	1.00	98.00	98.00	.00
208B	88.20	.20			.59
209A	28.00	.00	32.00	52.00	.74
209A	7.00	1.00	98.00	98.00	.00
209A	35.00	.20			.59
209B	40.32	.00	56.00	75.80	.42
209B	10.08	1.00	98.00	98.00	.00
209B	50.40	.20			.34
209C	28.24	.00	69.00	86.20	.29
209C	7.06	1.00	98.00	98.00	.00
209C	35.30	.20			.23

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
261	4.20	.00	78.00	92.80	.18
262A	13.80	.00	78.00	92.80	.18
262B	22.72	.00	32.00	52.00	.74
262B	5.68	1.00	98.00	98.00	.00
262B	28.40	.20			.59
263A	8.20	.00	78.00	92.80	.18
263B	29.36	.00	32.00	52.00	.74
263B	7.34	1.00	98.00	98.00	.00
263B	36.70	.20			.59
263C	37.52	.00	69.00	86.20	.29
263C	9.38	1.00	98.00	98.00	.00
263C	46.90	.20			.23
264A	2.80	.00	32.00	52.00	.74
264A	.70	1.00	98.00	98.00	.00
264A	3.50	.20			.59
264B	71.04	.00	69.00	86.20	.29
264B	17.76	1.00	98.00	98.00	.00
264B	88.80	.20			.23
265A	28.80	.00	32.00	52.00	.74
265A	7.20	1.00	98.00	98.00	.00
265A	36.00	.20			.59
265B	56.48	.00	69.00	86.20	.29
265B	14.12	1.00	98.00	98.00	.00
265B	70.60	.20			.23
209D	16.00	.00	32.00	52.00	.74
209D	4.00	1.00	98.00	98.00	.00
209D	20.00	.20			.59
209E	32.08	.00	56.00	75.80	.42
209E	8.02	1.00	98.00	98.00	.00
209E	40.10	.20			.34
209F	98.88	.00	69.00	86.20	.29
209F	24.72	1.00	98.00	98.00	.00
209F	123.60	.20			.23
210	57.92	.00	56.00	75.80	.42
210	14.48	1.00	98.00	98.00	.00
210	72.40	.20			.34
291A	5.10	.00	78.00	92.80	.18
291B	3.92	.00	32.00	52.00	.74
291B	.98	1.00	98.00	98.00	.00
291B	4.90	.20			.59
292A	8.00	.00	32.00	52.00	.74

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
292A	2.00	1.00	98.00	98.00	.00
292A	10.00	.20			.59
292B	29.44	.00	69.00	86.20	.29
292B	7.36	1.00	98.00	98.00	.00
292B	36.80	.20			.23
293	74.88	.00	69.00	86.20	.29
293	18.72	1.00	98.00	98.00	.00
293	93.60	.20			.23
294	77.12	.00	69.00	86.20	.29
294	19.28	1.00	98.00	98.00	.00
294	96.40	.20			.23
295A	71.20	.00	56.00	75.80	.42
295A	17.80	1.00	98.00	98.00	.00
295A	89.00	.20			.34
295B	102.88	.00	69.00	86.20	.29
295B	25.72	1.00	98.00	98.00	.00
295B	128.60	.20			.23
210B	52.16	.00	56.00	75.80	.42
210B	13.04	1.00	98.00	98.00	.00
210B	65.20	.20			.34
211A	141.04	.00	56.00	75.80	.42
211A	35.26	1.00	98.00	98.00	.00
211A	176.30	.20			.34
231	8.80	.00	91.00	98.20	.06
232	18.90	.00	91.00	98.20	.06
233	36.70	.00	91.00	98.20	.06
234	73.00	.00	91.00	98.20	.06
235A	4.50	.00	78.00	92.80	.18
235B	62.00	.00	91.00	98.20	.06
241	10.00	.00	91.00	98.20	.06
242	76.60	.00	91.00	98.20	.06
243A	93.80	.00	91.00	98.20	.06
243B	2.00	.00	86.00	97.20	.11
233A	2.00	.00	86.00	97.20	.11
233B	83.50	.00	91.00	98.20	.06
201A	2.40	.00	86.00	97.20	.11
201B	2.00	.00	91.00	98.20	.06
202A	4.30	.00	86.00	97.20	.11
202B	32.10	.00	91.00	98.20	.06
235	38.60	.00	86.00	97.20	.11
236A	2.20	.00	91.00	98.20	.06

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
236B	9.80	.00	78.00	92.80	.18
2.71	4.20	.00	86.00	97.20	.11
272	24.20	.00	86.00	97.20	.11
273A	28.70	.00	86.00	97.20	.11
273B	8.70	.00	91.00	98.20	.06
236	53.30	.00	91.00	98.20	.06
237	2.00	.00	78.00	92.80	.18
237B	36.30	.00	91.00	98.20	.06
237C	50.72	.00	69.00	86.20	.29
237C	12.68	1.00	98.00	98.00	.00
237C	63.40	.20			.23
251	4.20	.00	91.00	98.20	.06
252	8.10	.00	91.00	98.20	.06
253A	55.10	.00	86.00	97.20	.11
253B	13.70	.00	91.00	98.20	.06
254	34.90	.00	86.00	97.20	.11
255A	47.70	.00	86.00	97.20	.11
255B	19.40	.00	91.00	98.20	.06
230	3.00	.00	91.00	98.20	.06
240A	5.00	.00	86.00	97.20	.11
240B	11.00	.00	91.00	98.20	.06
250A	26.60	.00	86.00	97.20	.11
250B	1.00	.00	91.00	98.20	.06
260	49.60	.00	86.00	97.20	.11
255A	22.10	.00	86.00	97.20	.11
255B	43.10	.00	91.00	98.20	.06
237A	17.00	.00	91.00	98.20	.06
237B	57.60	.00	69.00	86.20	.29
237B	14.40	1.00	98.00	98.00	.00
237B	72.00	.20			.23
238	103.60	.00	69.00	86.20	.29
238	25.90	1.00	98.00	98.00	.00
238	129.50	.20			.23
239	75.68	.00	69.00	86.20	.29
239	18.92	1.00	98.00	98.00	.00
239	94.60	.20			.23
211A	85.20	.00	56.00	75.80	.42
211A	21.30	1.00	98.00	98.00	.00
211A	106.50	.20			.34
211B	153.52	.00	69.00	86.20	.29
211B	38.38	1.00	98.00	98.00	.00
211B	191.90	.20			.23

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
212A	213.84	.00	56.00	75.80	.42
212A	53.46	1.00	98.00	98.00	.00
212A	267.30	.20			.34
212B	122.64	.00	69.00	86.20	.29
212B	30.66	1.00	98.00	98.00	.00
212B	153.30	.20			.23
213A	22.48	.00	56.00	75.80	.42
213A	5.62	1.00	98.00	98.00	.00
213A	28.10	.20			.34
213B	11.28	.00	69.00	86.20	.29
213B	2.82	1.00	98.00	98.00	.00
213B	14.10	.20			.23
214	50.72	.00	56.00	75.80	.42
214	12.68	1.00	98.00	98.00	.00
214	63.40	.20			.34
215A	85.20	.00	56.00	75.80	.42
215A	21.30	1.00	98.00	98.00	.00
215A	106.50	.20			.34
21	4.40	.00	56.00	75.80	.42
21	1.10	1.00	98.00	98.00	.00
21	5.50	.20			.34
22A	19.12	.00	56.00	75.80	.42
22A	4.78	1.00	98.00	98.00	.00
22A	23.90	.20			.34
22B	8.80	.00	69.00	86.20	.29
22B	2.20	1.00	98.00	98.00	.00
22B	11.00	.20			.23
23	16.24	.00	56.00	75.80	.42
23	4.06	1.00	98.00	98.00	.00
23	20.30	.20			.34
23B	52.80	.00	69.00	86.20	.29
23B	13.20	1.00	98.00	98.00	.00
23B	66.00	.20			.23
24	161.68	.00	69.00	86.20	.29
24	40.42	1.00	98.00	98.00	.00
24	202.10	.20			.23
25	65.36	.00	69.00	86.20	.29
25	16.34	1.00	98.00	98.00	.00
25	81.70	.20			.23
26A	49.76	.00	56.00	75.80	.42
26A	12.44	1.00	98.00	98.00	.00
26A	62.20	.20			.34

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
26B	71.44	.00	69.00	86.20	.29
26B	17.86	1.00	98.00	98.00	.00
26B	89.30	.20			.23
215B	5.84	.00	69.00	86.20	.29
215B	1.46	1.00	98.00	98.00	.00
215B	7.30	.20			.23
215C	66.88	.00	56.00	75.80	.42
215C	16.72	1.00	98.00	98.00	.00
215C	83.60	.20			.34
216	63.04	.00	56.00	75.80	.42
216	15.76	1.00	98.00	98.00	.00
216	78.80	.20			.34
217A	54.40	.00	56.00	75.80	.42
217A	13.60	1.00	98.00	98.00	.00
217A	68.00	.20			.34
217B	35.28	.00	69.00	86.20	.29
217B	8.82	1.00	98.00	98.00	.00
217B	44.10	.20			.23
281	3.00	.00	86.00	97.20	.11
282	12.20	.00	86.00	97.20	.11
283	51.90	.00	86.00	97.20	.11
284A	63.30	.00	86.00	97.20	.11
284B	10.70	.00	91.00	98.20	.06
284C	9.12	.00	69.00	86.20	.29
284C	2.28	1.00	98.00	98.00	.00
284C	11.40	.20			.23
284D	169.00	.00	86.00	97.20	.11
285A	6.40	.00	91.00	98.20	.06
285B	74.24	.00	69.00	86.20	.29
285B	18.56	1.00	98.00	98.00	.00
285B	92.80	.20			.23
286A	16.50	.00	86.00	97.20	.11
286B	576.00	.00	69.00	86.20	.29
286B	144.00	1.00	98.00	98.00	.00
286B	720.00	.20			.23
287A	123.76	.00	56.00	75.80	.42
287A	30.94	1.00	98.00	98.00	.00
287A	154.70	.20			.34
287B	32.16	.00	69.00	86.20	.29
287B	8.04	1.00	98.00	98.00	.00
287B	40.20	.20			.23

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.17

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
288	253.44	.00	56.00	75.80	.42
288	63.36	1.00	98.00	98.00	.00
288	316.80	.20			.34
289	207.12	.00	56.00	75.80	.42
289	51.78	1.00	98.00	98.00	.00
289	258.90	.20			.34
217A	161.68	.00	56.00	75.80	.42
217A	40.42	1.00	98.00	98.00	.00
217A	202.10	.20			.34
217B	14.56	.00	69.00	86.20	.29
217B	3.64	1.00	98.00	98.00	.00
217B	18.20	.20			.23
117A	52.92	.00	56.00	75.80	.42
117A	22.68	1.00	98.00	98.00	.00
117A	75.60	.30			.29
117B	48.23	.00	69.00	86.20	.29
117B	20.67	1.00	98.00	98.00	.00
117B	68.90	.30			.20
117C	5.18	.00	65.00	83.00	.31
117C	.92	1.00	98.00	98.00	.00
117C	6.10	.15			.27

LOSSRATE PARAMETERS FOR WATERSHED 2,DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	7822.80
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.255
LOW LOSS FRACTION (Y BAR)	=	.287

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 3.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
301	3.00	.20	69.00
302	16.80	.20	32.00
303A	62.50	.20	69.00
303B	4.90	.20	69.00
304A	75.30	.20	69.00
304B	12.54	.20	32.00
304C	2.75	.20	56.00
305A	5.00	.20	56.00
305B	73.00	.20	69.00
306A	43.10	.20	56.00
306B	73.50	.20	69.00
307	312.20	.20	69.00

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 3.07

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
301	2.40	.00	69.00	86.20	.29
301	.60	1.00	98.00	98.00	.00
301	3.00	.20			.23
302	13.44	.00	32.00	52.00	.74
302	3.36	1.00	98.00	98.00	.00
302	16.80	.20			.59
303A	50.00	.00	69.00	86.20	.29
303A	12.50	1.00	98.00	98.00	.00
303A	62.50	.20			.23
303B	3.92	.00	69.00	86.20	.29
303B	.98	1.00	98.00	98.00	.00
303B	4.90	.20			.23
304A	60.24	.00	69.00	86.20	.29
304A	15.06	1.00	98.00	98.00	.00
304A	75.30	.20			.23
304B	10.03	.00	32.00	52.00	.74
304B	2.51	1.00	98.00	98.00	.00
304B	12.54	.20			.59
304C	2.20	.00	56.00	75.80	.42
304C	.55	1.00	98.00	98.00	.00
304C	2.75	.20			.34
305A	4.00	.00	56.00	75.80	.42
305A	1.00	1.00	98.00	98.00	.00
305A	5.00	.20			.34
305B	58.40	.00	69.00	86.20	.29
305B	14.60	1.00	98.00	98.00	.00
305B	73.00	.20			.23
306A	34.48	.00	56.00	75.80	.42
306A	8.62	1.00	98.00	98.00	.00
306A	43.10	.20			.34
306B	58.80	.00	69.00	86.20	.29
306B	14.70	1.00	98.00	98.00	.00
306B	73.50	.20			.23
307	249.76	.00	69.00	86.20	.29
307	62.44	1.00	98.00	98.00	.00
307	312.20	.20			.23

WATERSHED 3, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	684.59
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.253
LOW LOSS FRACTION (Y BAR)	=	.284

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 3.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
301	3.00	.20	69.00
302	16.80	.20	32.00
303A	62.50	.20	69.00
303B	4.90	.20	69.00
304A	75.30	.20	69.00
304B	12.54	.20	32.00
304C	2.75	.20	56.00
305A	5.00	.20	56.00
305B	73.00	.20	69.00
306A	43.10	.20	56.00
306B	73.50	.20	69.00
307	312.20	.20	69.00
308	52.30	.20	69.00
309A	76.20	.20	56.00
309B	41.30	.20	69.00
310	101.10	.20	56.00

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 3.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
301	2.40	.00	69.00	86.20	.29
301	.60	1.00	98.00	98.00	.00
301	3.00	.20			.23
302	13.44	.00	32.00	52.00	.74
302	3.36	1.00	98.00	98.00	.00
302	16.80	.20			.59
303A	50.00	.00	69.00	86.20	.29
303A	12.50	1.00	98.00	98.00	.00
303A	62.50	.20			.23
303B	3.92	.00	69.00	86.20	.29
303B	.98	1.00	98.00	98.00	.00
303B	4.90	.20			.23
304A	60.24	.00	69.00	86.20	.29
304A	15.06	1.00	98.00	98.00	.00
304A	75.30	.20			.23
304B	10.03	.00	32.00	52.00	.74
304B	2.51	1.00	98.00	98.00	.00
304B	12.54	.20			.59
304C	2.20	.00	56.00	75.80	.42
304C	.55	1.00	98.00	98.00	.00
304C	2.75	.20			.34
305A	4.00	.00	56.00	75.80	.42
305A	1.00	1.00	98.00	98.00	.00
305A	5.00	.20			.34
305B	58.40	.00	69.00	86.20	.29
305B	14.60	1.00	98.00	98.00	.00
305B	73.00	.20			.23
306A	34.48	.00	56.00	75.80	.42
306A	8.62	1.00	98.00	98.00	.00
306A	43.10	.20			.34
306B	58.80	.00	69.00	86.20	.29
306B	14.70	1.00	98.00	98.00	.00
306B	73.50	.20			.23
307	249.76	.00	69.00	86.20	.29
307	62.44	1.00	98.00	98.00	.00
307	312.20	.20			.23
308	41.84	.00	69.00	86.20	.29
308	10.46	1.00	98.00	98.00	.00
308	52.30	.20			.23
309A	60.96	.00	56.00	75.80	.42
309A	15.24	1.00	98.00	98.00	.00
309A	76.20	.20			.34

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 3.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
309B	33.04	.00	69.00	86.20	.29
309B	8.26	1.00	98.00	98.00	.00
309B	41.30	.20			.23
310	80.88	.00	56.00	75.80	.42
310	20.22	1.00	98.00	98.00	.00
310	101.10	.20			.34

WATERSHED 3, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	955.49
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.266
LOW LOSS FRACTION (Y BAR)	=	.304

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 312

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
301	3.00	.20	69.00
302	16.80	.20	32.00
303A	62.50	.20	69.00
303B	4.90	.20	69.00
304A	75.30	.20	69.00
304B	12.54	.20	32.00
304C	2.75	.20	56.00
305A	5.00	.20	56.00
305B	73.00	.20	69.00
306A	43.10	.20	56.00
306B	73.50	.20	69.00
307	312.20	.20	69.00
308	52.30	.20	69.00
309A	76.20	.20	56.00
309B	41.30	.20	69.00
310	101.10	.20	56.00
312A	220.70	.20	56.00
312A	104.70	.20	56.00
312B	206.60	.20	69.00

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 312

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
301	2.40	.00	69.00	86.20	.29
301	.60	1.00	98.00	98.00	.00
301	3.00	.20			.23
302	13.44	.00	32.00	52.00	.74
302	3.36	1.00	98.00	98.00	.00
302	16.80	.20			.59
303A	50.00	.00	69.00	86.20	.29
303A	12.50	1.00	98.00	98.00	.00
303A	62.50	.20			.23
303B	3.92	.00	69.00	86.20	.29
303B	.98	1.00	98.00	98.00	.00
303B	4.90	.20			.23
304A	60.24	.00	69.00	86.20	.29
304A	15.06	1.00	98.00	98.00	.00
304A	75.30	.20			.23
304B	10.03	.00	32.00	52.00	.74
304B	2.51	1.00	98.00	98.00	.00
304B	12.54	.20			.59
304C	2.20	.00	56.00	75.80	.42
304C	.55	1.00	98.00	98.00	.00
304C	2.75	.20			.34
305A	4.00	.00	56.00	75.80	.42
305A	1.00	1.00	98.00	98.00	.00
305A	5.00	.20			.34
305B	58.40	.00	69.00	86.20	.29
305B	14.60	1.00	98.00	98.00	.00
305B	73.00	.20			.23
306A	34.48	.00	56.00	75.80	.42
306A	8.62	1.00	98.00	98.00	.00
306A	43.10	.20			.34
306B	58.80	.00	69.00	86.20	.29
306B	14.70	1.00	98.00	98.00	.00
306B	73.50	.20			.23
307	249.76	.00	69.00	86.20	.29
307	62.44	1.00	98.00	98.00	.00
307	312.20	.20			.23
308	41.84	.00	69.00	86.20	.29
308	10.46	1.00	98.00	98.00	.00
308	52.30	.20			.23
309A	60.96	.00	56.00	75.80	.42
309A	15.24	1.00	98.00	98.00	.00
309A	76.20	.20			.34

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 312

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
309B	33.04	.00	69.00	86.20	.29
309B	8.26	1.00	98.00	98.00	.00
309B	41.30	.20			.23
310	80.88	.00	56.00	75.80	.42
310	20.22	1.00	98.00	98.00	.00
310	101.10	.20			.34
312A	176.56	.00	56.00	75.80	.42
312A	44.14	1.00	98.00	98.00	.00
312A	220.70	.20			.34
312A	83.76	.00	56.00	75.80	.42
312A	20.94	1.00	98.00	98.00	.00
312A	104.70	.20			.34
312B	165.28	.00	69.00	86.20	.29
312B	41.32	1.00	98.00	98.00	.00
312B	206.60	.20			.23

WATERSHED 3, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	1487.49
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.276
LOW LOSS FRACTION (Y BAR)	=	.320

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 4.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
301	3.00	.20	69.00
302	16.80	.20	32.00
303A	62.50	.20	69.00
303B	4.90	.20	69.00
304A	75.30	.20	69.00
304B	12.54	.20	32.00
304C	2.75	.20	56.00
305A	5.00	.20	56.00
305B	73.00	.20	69.00
306A	43.10	.20	56.00
306B	73.50	.20	69.00
307	312.20	.20	69.00
308	52.30	.20	69.00
309A	76.20	.20	56.00
309B	41.30	.20	69.00
310	101.10	.20	56.00
312A	220.70	.20	56.00
312A	104.70	.20	56.00
312B	206.60	.20	69.00
413A	3.50	.15	77.00
413B	155.00	.30	69.00

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
301	2.40	.00	69.00	86.20	.29
301	.60	1.00	98.00	98.00	.00
301	3.00	.20			.23
302	13.44	.00	32.00	52.00	.74
302	3.36	1.00	98.00	98.00	.00
302	16.80	.20			.59
303A	50.00	.00	69.00	86.20	.29
303A	12.50	1.00	98.00	98.00	.00
303A	62.50	.20			.23
303B	3.92	.00	69.00	86.20	.29
303B	.98	1.00	98.00	98.00	.00
303B	4.90	.20			.23
304A	60.24	.00	69.00	86.20	.29
304A	15.06	1.00	98.00	98.00	.00
304A	75.30	.20			.23
304B	10.03	.00	32.00	52.00	.74
304B	2.51	1.00	98.00	98.00	.00
304B	12.54	.20			.59
304C	2.20	.00	56.00	75.80	.42
304C	.55	1.00	98.00	98.00	.00
304C	2.75	.20			.34
305A	4.00	.00	56.00	75.80	.42
305A	1.00	1.00	98.00	98.00	.00
305A	5.00	.20			.34
305B	58.40	.00	69.00	86.20	.29
305B	14.60	1.00	98.00	98.00	.00
305B	73.00	.20			.23
306A	34.48	.00	56.00	75.80	.42
306A	8.62	1.00	98.00	98.00	.00
306A	43.10	.20			.34
306B	58.80	.00	69.00	86.20	.29
306B	14.70	1.00	98.00	98.00	.00
306B	73.50	.20			.23
307	249.76	.00	69.00	86.20	.29
307	62.44	1.00	98.00	98.00	.00
307	312.20	.20			.23
308	41.84	.00	69.00	86.20	.29
308	10.46	1.00	98.00	98.00	.00
308	52.30	.20			.23
309A	60.96	.00	56.00	75.80	.42
309A	15.24	1.00	98.00	98.00	.00
309A	76.20	.20			.34

WATERSHED 3, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
309B	33.04	.00	69.00	86.20	.29
309B	8.26	1.00	98.00	98.00	.00
309B	41.30	.20			.23
310	80.88	.00	56.00	75.80	.42
310	20.22	1.00	98.00	98.00	.00
310	101.10	.20			.34
312A	176.56	.00	56.00	75.80	.42
312A	44.14	1.00	98.00	98.00	.00
312A	220.70	.20			.34
312A	83.76	.00	56.00	75.80	.42
312A	20.94	1.00	98.00	98.00	.00
312A	104.70	.20			.34
312B	165.28	.00	69.00	86.20	.29
312B	41.32	1.00	98.00	98.00	.00
312B	206.60	.20			.23
413A	2.97	.00	77.00	92.20	.19
413A	.53	1.00	98.00	98.00	.00
413A	3.50	.15			.16
413B	108.50	.00	69.00	86.20	.29
413B	46.50	1.00	98.00	98.00	.00
413B	155.00	.30			.20

WATERSHED 3, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	1645.99
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.269
LOW LOSS FRACTION (Y BAR)	=	.311

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 4.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
401	3.00	.20	32.00
402	24.80	.20	32.00
403	53.00	.20	32.00
404A	35.80	.20	32.00
404B	21.10	.20	69.00
405A	9.10	.20	32.00
405B	119.40	.20	69.00
406	64.30	.20	69.00
407	202.00	.20	69.00
408	81.70	.20	69.00
409A	26.60	.20	69.00
409B	31.20	.20	56.00

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.09

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
401	2.40	.00	32.00	52.00	.74
401	.60	1.00	98.00	98.00	.00
401	3.00	.20			.59
402	19.84	.00	32.00	52.00	.74
402	4.96	1.00	98.00	98.00	.00
402	24.80	.20			.59
403	42.40	.00	32.00	52.00	.74
403	10.60	1.00	98.00	98.00	.00
403	53.00	.20			.59
404A	28.64	.00	32.00	52.00	.74
404A	7.16	1.00	98.00	98.00	.00
404A	35.80	.20			.59
404B	16.88	.00	69.00	86.20	.29
404B	4.22	1.00	98.00	98.00	.00
404B	21.10	.20			.23
405A	7.28	.00	32.00	52.00	.74
405A	1.82	1.00	98.00	98.00	.00
405A	9.10	.20			.59
405B	95.52	.00	69.00	86.20	.29
405B	23.88	1.00	98.00	98.00	.00
405B	119.40	.20			.23
406	51.44	.00	69.00	86.20	.29
406	12.86	1.00	98.00	98.00	.00
406	64.30	.20			.23
407	161.60	.00	69.00	86.20	.29
407	40.40	1.00	98.00	98.00	.00
407	202.00	.20			.23
408	65.36	.00	69.00	86.20	.29
408	16.34	1.00	98.00	98.00	.00
408	81.70	.20			.23
409A	21.28	.00	69.00	86.20	.29
409A	5.32	1.00	98.00	98.00	.00
409A	26.60	.20			.23
409B	24.96	.00	56.00	75.80	.42
409B	6.24	1.00	98.00	98.00	.00
409B	31.20	.20			.34

WATERSHED 4, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	672.00
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.302
LOW LOSS FRACTION (Y BAR)	=	.341

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 4.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
401	3.00	.20	32.00
402	24.80	.20	32.00
403	53.00	.20	32.00
404A	35.80	.20	32.00
404B	21.10	.20	69.00
405A	9.10	.20	32.00
405B	119.40	.20	69.00
406	64.30	.20	69.00
407	202.00	.20	69.00
408	81.70	.20	69.00
409A	26.60	.20	69.00
409B	31.20	.20	56.00
410A	35.80	.20	69.00
410B	53.30	.20	56.00
421	10.00	.20	69.00
422	57.00	.20	69.00
423	66.10	.20	69.00
424	179.00	.20	69.00
431	6.00	.20	69.00
432	49.60	.20	69.00
433	173.50	.20	69.00
424A	83.60	.20	69.00
425A	10.90	.20	56.00
425B	36.70	.20	69.00
410C	137.00	.20	69.00
410D	44.20	.20	56.00

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
401	2.40	.00	32.00	52.00	.74
401	.60	1.00	98.00	98.00	.00
401	3.00	.20			.59
402	19.84	.00	32.00	52.00	.74
402	4.96	1.00	98.00	98.00	.00
402	24.80	.20			.59
403	42.40	.00	32.00	52.00	.74
403	10.60	1.00	98.00	98.00	.00
403	53.00	.20			.59
404A	28.64	.00	32.00	52.00	.74
404A	7.16	1.00	98.00	98.00	.00
404A	35.80	.20			.59
404B	16.88	.00	69.00	86.20	.29
404B	4.22	1.00	98.00	98.00	.00
404B	21.10	.20			.23
405A	7.28	.00	32.00	52.00	.74
405A	1.82	1.00	98.00	98.00	.00
405A	9.10	.20			.59
405B	95.52	.00	69.00	86.20	.29
405B	23.88	1.00	98.00	98.00	.00
405B	119.40	.20			.23
406	51.44	.00	69.00	86.20	.29
406	12.86	1.00	98.00	98.00	.00
406	64.30	.20			.23
407	161.60	.00	69.00	86.20	.29
407	40.40	1.00	98.00	98.00	.00
407	202.00	.20			.23
408	65.36	.00	69.00	86.20	.29
408	16.34	1.00	98.00	98.00	.00
408	81.70	.20			.23
409A	21.28	.00	69.00	86.20	.29
409A	5.32	1.00	98.00	98.00	.00
409A	26.60	.20			.23
409B	24.96	.00	56.00	75.80	.42
409B	6.24	1.00	98.00	98.00	.00
409B	31.20	.20			.34
410A	28.64	.00	69.00	86.20	.29
410A	7.16	1.00	98.00	98.00	.00
410A	35.80	.20			.23
410B	42.64	.00	56.00	75.80	.42
410B	10.66	1.00	98.00	98.00	.00
410B	53.30	.20			.34

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
421	8.00	.00	69.00	86.20	.29
421	2.00	1.00	98.00	98.00	.00
421	10.00	.20			.23
422	45.60	.00	69.00	86.20	.29
422	11.40	1.00	98.00	98.00	.00
422	57.00	.20			.23
423	52.88	.00	69.00	86.20	.29
423	13.22	1.00	98.00	98.00	.00
423	66.10	.20			.23
424	143.20	.00	69.00	86.20	.29
424	35.80	1.00	98.00	98.00	.00
424	179.00	.20			.23
431	4.80	.00	69.00	86.20	.29
431	1.20	1.00	98.00	98.00	.00
431	6.00	.20			.23
432	39.68	.00	69.00	86.20	.29
432	9.92	1.00	98.00	98.00	.00
432	49.60	.20			.23
433	138.80	.00	69.00	86.20	.29
433	34.70	1.00	98.00	98.00	.00
433	173.50	.20			.23
424A	66.88	.00	69.00	86.20	.29
424A	16.72	1.00	98.00	98.00	.00
424A	83.60	.20			.23
425A	8.72	.00	56.00	75.80	.42
425A	2.18	1.00	98.00	98.00	.00
425A	10.90	.20			.34
425B	29.36	.00	69.00	86.20	.29
425B	7.34	1.00	98.00	98.00	.00
425B	36.70	.20			.23
410C	109.60	.00	69.00	86.20	.29
410C	27.40	1.00	98.00	98.00	.00
410C	137.00	.20			.23
410D	35.36	.00	56.00	75.80	.42
410D	8.84	1.00	98.00	98.00	.00
410D	44.20	.20			.34

WATERSHED 4, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	1614.70
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.267
LOW LOSS FRACTION (Y BAR)	=	.300

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

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WATERSHED 4, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 4.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
401	3.00	.20	32.00
402	24.80	.20	32.00
403	53.00	.20	32.00
404A	35.80	.20	32.00
404B	21.10	.20	69.00
405A	9.10	.20	32.00
405B	119.40	.20	69.00
406	64.30	.20	69.00
407	202.00	.20	69.00
408	81.70	.20	69.00
409A	26.60	.20	69.00
409B	31.20	.20	56.00
410A	35.80	.20	69.00
410B	53.30	.20	56.00
421	10.00	.20	69.00
422	57.00	.20	69.00
423	66.10	.20	69.00
424	179.00	.20	69.00
431	6.00	.20	69.00
432	49.60	.20	69.00
433	173.50	.20	69.00
424A	83.60	.20	69.00
425A	10.90	.20	56.00
425B	36.70	.20	69.00
410C	137.00	.20	69.00
410D	44.20	.20	56.00
411	52.35	.20	56.00
412A	244.30	.20	56.00
412B	92.80	.20	69.00
441	5.00	.20	69.00
442	52.30	.20	69.00
443	67.90	.20	69.00
444A	72.40	.20	69.00
444B	67.90	.20	56.00
412C	96.40	.20	69.00
412D	101.00	.20	56.00

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
401	2.40	.00	32.00	52.00	.74
401	.60	1.00	98.00	98.00	.00
401	3.00	.20			.59
402	19.84	.00	32.00	52.00	.74
402	4.96	1.00	98.00	98.00	.00
402	24.80	.20			.59
403	42.40	.00	32.00	52.00	.74
403	10.60	1.00	98.00	98.00	.00
403	53.00	.20			.59
404A	28.64	.00	32.00	52.00	.74
404A	7.16	1.00	98.00	98.00	.00
404A	35.80	.20			.59
404B	16.88	.00	69.00	86.20	.29
404B	4.22	1.00	98.00	98.00	.00
404B	21.10	.20			.23
405A	7.28	.00	32.00	52.00	.74
405A	1.82	1.00	98.00	98.00	.00
405A	9.10	.20			.59
405B	95.52	.00	69.00	86.20	.29
405B	23.88	1.00	98.00	98.00	.00
405B	119.40	.20			.23
406	51.44	.00	69.00	86.20	.29
406	12.86	1.00	98.00	98.00	.00
406	64.30	.20			.23
407	161.60	.00	69.00	86.20	.29
407	40.40	1.00	98.00	98.00	.00
407	202.00	.20			.23
408	65.36	.00	69.00	86.20	.29
408	16.34	1.00	98.00	98.00	.00
408	81.70	.20			.23
409A	21.28	.00	69.00	86.20	.29
409A	5.32	1.00	98.00	98.00	.00
409A	26.60	.20			.23
409B	24.96	.00	56.00	75.80	.42
409B	6.24	1.00	98.00	98.00	.00
409B	31.20	.20			.34
410A	28.64	.00	69.00	86.20	.29
410A	7.16	1.00	98.00	98.00	.00
410A	35.80	.20			.23
410B	42.64	.00	56.00	75.80	.42
410B	10.66	1.00	98.00	98.00	.00
410B	53.30	.20			.34

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
421	8.00	.00	69.00	86.20	.29
421	2.00	1.00	98.00	98.00	.00
421	10.00	.20			.23
422	45.60	.00	69.00	86.20	.29
422	11.40	1.00	98.00	98.00	.00
422	57.00	.20			.23
423	52.88	.00	69.00	86.20	.29
423	13.22	1.00	98.00	98.00	.00
423	66.10	.20			.23
424	143.20	.00	69.00	86.20	.29
424	35.80	1.00	98.00	98.00	.00
424	179.00	.20			.23
431	4.80	.00	69.00	86.20	.29
431	1.20	1.00	98.00	98.00	.00
431	6.00	.20			.23
432	39.68	.00	69.00	86.20	.29
432	9.92	1.00	98.00	98.00	.00
432	49.60	.20			.23
433	138.80	.00	69.00	86.20	.29
433	34.70	1.00	98.00	98.00	.00
433	173.50	.20			.23
424A	66.88	.00	69.00	86.20	.29
424A	16.72	1.00	98.00	98.00	.00
424A	83.60	.20			.23
425A	8.72	.00	56.00	75.80	.42
425A	2.18	1.00	98.00	98.00	.00
425A	10.90	.20			.34
425B	29.36	.00	69.00	86.20	.29
425B	7.34	1.00	98.00	98.00	.00
425B	36.70	.20			.23
410C	109.60	.00	69.00	86.20	.29
410C	27.40	1.00	98.00	98.00	.00
410C	137.00	.20			.23
410D	35.36	.00	56.00	75.80	.42
410D	8.84	1.00	98.00	98.00	.00
410D	44.20	.20			.34
411	41.88	.00	56.00	75.80	.42
411	10.47	1.00	98.00	98.00	.00
411	52.35	.20			.34
412A	195.44	.00	56.00	75.80	.42
412A	48.86	1.00	98.00	98.00	.00
412A	244.30	.20			.34

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.12

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
412B	74.24	.00	69.00	86.20	.29
412B	18.56	1.00	98.00	98.00	.00
412B	92.80	.20			.23
441	4.00	.00	69.00	86.20	.29
441	1.00	1.00	98.00	98.00	.00
441	5.00	.20			.23
442	41.84	.00	69.00	86.20	.29
442	10.46	1.00	98.00	98.00	.00
442	52.30	.20			.23
443	54.32	.00	69.00	86.20	.29
443	13.58	1.00	98.00	98.00	.00
443	67.90	.20			.23
444A	57.92	.00	69.00	86.20	.29
444A	14.48	1.00	98.00	98.00	.00
444A	72.40	.20			.23
444B	54.32	.00	56.00	75.80	.42
444B	13.58	1.00	98.00	98.00	.00
444B	67.90	.20			.34
412C	77.12	.00	69.00	86.20	.29
412C	19.28	1.00	98.00	98.00	.00
412C	96.40	.20			.23
412D	80.80	.00	56.00	75.80	.42
412D	20.20	1.00	98.00	98.00	.00
412D	101.00	.20			.34

WATERSHED 4, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	2467.05
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.274
LOW LOSS FRACTION (Y BAR)	=	.314

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 4.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
401	3.00	.20	32.00
402	24.80	.20	32.00
403	53.00	.20	32.00
404A	35.80	.20	32.00
404B	21.10	.20	69.00
405A	9.10	.20	32.00
405B	119.40	.20	69.00
406	64.30	.20	69.00
407	202.00	.20	69.00
408	81.70	.20	69.00
409A	26.60	.20	69.00
409B	31.20	.20	56.00
410A	35.80	.20	69.00
410B	53.30	.20	56.00
421	10.00	.20	69.00
422	57.00	.20	69.00
423	66.10	.20	69.00
424	179.00	.20	69.00
431	6.00	.20	69.00
432	49.60	.20	69.00
433	173.50	.20	69.00
424A	83.60	.20	69.00
425A	10.90	.20	56.00
425B	36.70	.20	69.00
410C	137.00	.20	69.00
410D	44.20	.20	56.00
411	52.35	.20	56.00
412A	244.30	.20	56.00
412B	92.80	.20	69.00
441	5.00	.20	69.00
442	52.30	.20	69.00
443	67.90	.20	69.00
444A	72.40	.20	69.00
444B	67.90	.20	56.00
412C	96.40	.20	69.00
412D	101.00	.20	56.00
413A	70.70	.50	69.00
413B	55.10	.30	69.00
413C	11.90	.15	77.00

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
401	2.40	.00	32.00	52.00	.74
401	.60	1.00	98.00	98.00	.00
401	3.00	.20			.59
402	19.84	.00	32.00	52.00	.74
402	4.96	1.00	98.00	98.00	.00
402	24.80	.20			.59
403	42.40	.00	32.00	52.00	.74
403	10.60	1.00	98.00	98.00	.00
403	53.00	.20			.59
404A	28.64	.00	32.00	52.00	.74
404A	7.16	1.00	98.00	98.00	.00
404A	35.80	.20			.59
404B	16.88	.00	69.00	86.20	.29
404B	4.22	1.00	98.00	98.00	.00
404B	21.10	.20			.23
405A	7.28	.00	32.00	52.00	.74
405A	1.82	1.00	98.00	98.00	.00
405A	9.10	.20			.59
405B	95.52	.00	69.00	86.20	.29
405B	23.88	1.00	98.00	98.00	.00
405B	119.40	.20			.23
406	51.44	.00	69.00	86.20	.29
406	12.86	1.00	98.00	98.00	.00
406	64.30	.20			.23
407	161.60	.00	69.00	86.20	.29
407	40.40	1.00	98.00	98.00	.00
407	202.00	.20			.23
408	65.36	.00	69.00	86.20	.29
408	16.34	1.00	98.00	98.00	.00
408	81.70	.20			.23
409A	21.28	.00	69.00	86.20	.29
409A	5.32	1.00	98.00	98.00	.00
409A	26.60	.20			.23
409B	24.96	.00	56.00	75.80	.42
409B	6.24	1.00	98.00	98.00	.00
409B	31.20	.20			.34
410A	28.64	.00	69.00	86.20	.29
410A	7.16	1.00	98.00	98.00	.00
410A	35.80	.20			.23
410B	42.64	.00	56.00	75.80	.42
410B	10.66	1.00	98.00	98.00	.00
410B	53.30	.20			.34

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
421	8.00	.00	69.00	86.20	.29
421	2.00	1.00	98.00	98.00	.00
421	10.00	.20			.23
422	45.60	.00	69.00	86.20	.29
422	11.40	1.00	98.00	98.00	.00
422	57.00	.20			.23
423	52.88	.00	69.00	86.20	.29
423	13.22	1.00	98.00	98.00	.00
423	66.10	.20			.23
424	143.20	.00	69.00	86.20	.29
424	35.80	1.00	98.00	98.00	.00
424	179.00	.20			.23
431	4.80	.00	69.00	86.20	.29
431	1.20	1.00	98.00	98.00	.00
431	6.00	.20			.23
432	39.68	.00	69.00	86.20	.29
432	9.92	1.00	98.00	98.00	.00
432	49.60	.20			.23
433	138.80	.00	69.00	86.20	.29
433	34.70	1.00	98.00	98.00	.00
433	173.50	.20			.23
424A	66.88	.00	69.00	86.20	.29
424A	16.72	1.00	98.00	98.00	.00
424A	83.60	.20			.23
425A	8.72	.00	56.00	75.80	.42
425A	2.18	1.00	98.00	98.00	.00
425A	10.90	.20			.34
425B	29.36	.00	69.00	86.20	.29
425B	7.34	1.00	98.00	98.00	.00
425B	36.70	.20			.23
410C	109.60	.00	69.00	86.20	.29
410C	27.40	1.00	98.00	98.00	.00
410C	137.00	.20			.23
410D	35.36	.00	56.00	75.80	.42
410D	8.84	1.00	98.00	98.00	.00
410D	44.20	.20			.34
411	41.88	.00	56.00	75.80	.42
411	10.47	1.00	98.00	98.00	.00
411	52.35	.20			.34
412A	195.44	.00	56.00	75.80	.42
412A	48.86	1.00	98.00	98.00	.00
412A	244.30	.20			.34

WATERSHED 4, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 4.13

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
412B	74.24	.00	69.00	86.20	.29
412B	18.56	1.00	98.00	98.00	.00
412B	92.80	.20			.23
441	4.00	.00	69.00	86.20	.29
441	1.00	1.00	98.00	98.00	.00
441	5.00	.20			.23
442	41.84	.00	69.00	86.20	.29
442	10.46	1.00	98.00	98.00	.00
442	52.30	.20			.23
443	54.32	.00	69.00	86.20	.29
443	13.58	1.00	98.00	98.00	.00
443	67.90	.20			.23
444A	57.92	.00	69.00	86.20	.29
444A	14.48	1.00	98.00	98.00	.00
444A	72.40	.20			.23
444B	54.32	.00	56.00	75.80	.42
444B	13.58	1.00	98.00	98.00	.00
444B	67.90	.20			.34
412C	77.12	.00	69.00	86.20	.29
412C	19.28	1.00	98.00	98.00	.00
412C	96.40	.20			.23
412D	80.80	.00	56.00	75.80	.42
412D	20.20	1.00	98.00	98.00	.00
412D	101.00	.20			.34
413A	35.35	.00	69.00	86.20	.29
413A	35.35	1.00	98.00	98.00	.00
413A	70.70	.50			.14
413B	38.57	.00	69.00	86.20	.29
413B	16.53	1.00	98.00	98.00	.00
413B	55.10	.30			.20
413C	10.11	.00	77.00	92.20	.19
413C	1.78	1.00	98.00	98.00	.00
413C	11.90	.15			.16

WATERSHED 4, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	2604.75
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.268
LOW LOSS FRACTION (Y BAR)	=	.307

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 1A, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.18

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
101	4.50	.30	69.00
102	36.70	.30	69.00
103A	150.50	.30	69.00
103B	7.50	.15	77.00
104A	290.10	.30	69.00
104B	18.00	.15	77.00
118A	154.20	.30	56.00
118B	10.00	.30	69.00
118C	10.00	.15	65.00
118D	114.00	.50	56.00
118E	64.00	.50	69.00
118F	73.00	.90	69.00

WATERSHED 1A, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.18

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
101	3.15	.00	69.00	86.20	.29
101	1.35	1.00	98.00	98.00	.00
101	4.50	.30			.20
102	25.69	.00	69.00	86.20	.29
102	11.01	1.00	98.00	98.00	.00
102	36.70	.30			.20
103A	105.35	.00	69.00	86.20	.29
103A	45.15	1.00	98.00	98.00	.00
103A	150.50	.30			.20
103B	6.38	.00	77.00	92.20	.19
103B	1.13	1.00	98.00	98.00	.00
103B	7.50	.15			.16
104A	203.07	.00	69.00	86.20	.29
104A	87.03	1.00	98.00	98.00	.00
104A	290.10	.30			.20
104B	15.30	.00	77.00	92.20	.19
104B	2.70	1.00	98.00	98.00	.00
104B	18.00	.15			.16
118A	107.94	.00	56.00	75.80	.42
118A	46.26	1.00	98.00	98.00	.00
118A	154.20	.30			.29
118B	7.00	.00	69.00	86.20	.29
118B	3.00	1.00	98.00	98.00	.00
118B	10.00	.30			.20
118C	8.50	.00	65.00	83.00	.31
118C	1.50	1.00	98.00	98.00	.00
118C	10.00	.15			.27
118D	57.00	.00	56.00	75.80	.42
118D	57.00	1.00	98.00	98.00	.00
118D	114.00	.50			.21
118E	32.00	.00	69.00	86.20	.29
118E	32.00	1.00	98.00	98.00	.00
118E	64.00	.50			.14
118F	7.30	.00	69.00	86.20	.29
118F	65.70	1.00	98.00	98.00	.00
118F	73.00	.90			.03

WATERSHED 1A, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	932.50
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.199
LOW LOSS FRACTION (Y BAR)	=	.239

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

WATERSHED 1B, DESIGN NODE 1.18

LOSS RATE RAW INPUT DATA AT NODE 1.18

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
101A	1.30	.15	77.00
101B	2.80	.30	69.00
102A	2.00	.15	77.00
102B	29.50	.30	69.00
103A	14.20	.90	56.00
103B	33.00	.90	69.00
103C	73.00	.30	69.00
103D	2.90	.30	56.00
118A	72.20	.90	56.00
118B	32.00	.50	56.00
118C	18.40	.30	56.00
118D	11.90	.50	69.00
118E	1.90	.30	69.00

WATERSHED 1B, DESIGN NODE 1.18

LOSS RATE PROCESSED INPUT DATA AT NODE 1.18

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
101A	1.10	.00	77.00	92.20	.19
101A	.20	1.00	98.00	98.00	.00
101A	1.30	.15			.16
101B	1.96	.00	69.00	86.20	.29
101B	.84	1.00	98.00	98.00	.00
101B	2.80	.30			.20
102A	1.70	.00	77.00	92.20	.19
102A	.30	1.00	98.00	98.00	.00
102A	2.00	.15			.16
102B	20.65	.00	69.00	86.20	.29
102B	8.85	1.00	98.00	98.00	.00
102B	29.50	.30			.20
103A	1.42	.00	56.00	75.80	.42
103A	12.78	1.00	98.00	98.00	.00
103A	14.20	.90			.04
103B	3.30	.00	69.00	86.20	.29
103B	29.70	1.00	98.00	98.00	.00
103B	33.00	.90			.03
103C	51.10	.00	69.00	86.20	.29
103C	21.90	1.00	98.00	98.00	.00
103C	73.00	.30			.20
103D	2.03	.00	56.00	75.80	.42
103D	.87	1.00	98.00	98.00	.00
103D	2.90	.30			.29
118A	7.22	.00	56.00	75.80	.42
118A	64.98	1.00	98.00	98.00	.00
118A	72.20	.90			.04
118B	16.00	.00	56.00	75.80	.42
118B	16.00	1.00	98.00	98.00	.00
118B	32.00	.50			.21
118C	12.88	.00	56.00	75.80	.42
118C	5.52	1.00	98.00	98.00	.00
118C	18.40	.30			.29
118D	5.95	.00	69.00	86.20	.29
118D	5.95	1.00	98.00	98.00	.00
118D	11.90	.50			.14
118E	1.33	.00	69.00	86.20	.29
118E	.57	1.00	98.00	98.00	.00
118E	1.90	.30			.20

WATERSHED 1B, DESIGN NODE 1.18

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	295.10
24-HOUR RAIN (INCHES)	=	4.950
LOSS RATE FM (INCHES/HOUR)	=	.140
LOW LOSS FRACTION (Y BAR)	=	.183

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

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

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

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*          HYDROGRAPH AT NODE 1.05 ROUTED TO NODE 1.07                   *
*                                                                        *
 **************************************************************************

  FILE NAME: H105-118.INP
  TIME/DATE OF STUDY: 15:16   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.05 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     706.420 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =     .467 HOURS
          CAUTION: LAG TIME IS LESS THAN  .50 HOURS.
          THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
          MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
         VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .700
         VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .092
         LOW LOSS FRACTION =  .059
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  17.844


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                 1.799               153.692
       2                 6.730               421.303
       3                15.196               723.210
       4                27.373              1040.370
       5                38.443               945.731
       6                48.614               868.938
       7                55.731               607.987
       8                60.717               425.959
       9                64.702               340.487
      10                67.916               274.528
      11                70.668               235.156
      12                73.136               210.821
      13                75.325               187.058
      14                77.272               166.323
      15                79.015               148.894
      16                80.574               133.234
      17                81.992               121.128
      18                83.248               107.252
      19                84.385                97.151
      20                85.414                87.954
```

21	86.320	77.341
22	87.178	73.372
23	87.987	69.046
24	88.646	56.356
25	89.289	54.879
26	89.920	53.953
27	90.528	51.910
28	91.134	51.823
29	91.678	46.431
30	92.158	41.050
31	92.638	40.957
32	93.095	39.019
33	93.539	37.988
34	93.980	37.622
35	94.375	33.797
36	94.750	31.999
37	95.106	30.438
38	95.436	28.184
39	95.762	27.895
40	96.074	26.619
41	96.352	23.740
42	96.629	23.636
43	96.917	24.617
44	97.218	25.770
45	97.518	25.585
46	97.704	15.870
47	97.828	10.669
48	97.953	10.669
49	98.078	10.682
50	98.203	10.656
51	98.328	10.682
52	98.453	10.682
53	98.578	10.657
54	98.703	10.656
55	98.828	10.682
56	98.953	10.682
57	99.047	8.064
58	99.106	5.001
59	99.164	5.027
60	99.223	5.027
61	99.282	5.027
62	99.347	5.577
63	99.406	5.027
64	99.465	5.027
65	99.524	5.027
66	99.583	5.027
67	99.642	5.027
68	99.701	5.027
69	99.759	5.027
70	99.818	5.027
71	99.877	5.027
72	99.936	5.027
73	99.995	5.027
74	100.000	.452

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = .27
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.49

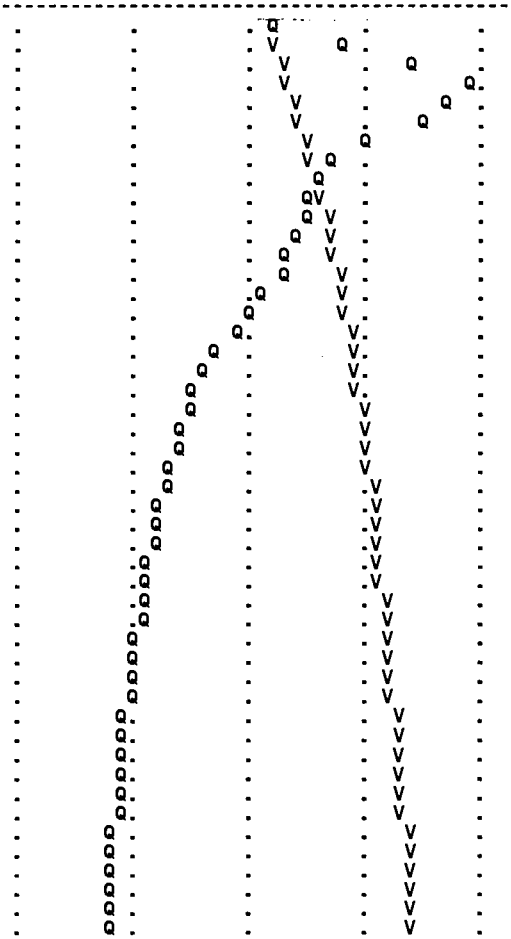
TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 15.9508
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 263.9464

118-196

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)
16.083	146.3020	334.28
16.167	149.2383	426.35
16.250	152.8131	519.06
16.333	156.9149	595.58
16.417	160.8054	564.90
16.500	164.4623	530.98
16.583	167.6252	459.26
16.667	170.4930	416.41
16.750	173.2341	398.00
16.833	175.8959	386.50
16.917	178.4986	377.90
17.000	181.0489	370.32
17.083	183.5282	359.99
17.167	185.9100	345.83
17.250	188.1680	327.86
17.333	190.2746	305.89
17.417	192.2426	285.75
17.500	194.0756	266.15
17.583	195.8048	251.09
17.667	197.4498	238.85
17.750	199.0191	227.86
17.833	200.5294	219.30
17.917	201.9834	211.12
18.000	203.3727	201.73
18.083	204.7201	195.64
18.167	206.0321	190.51
18.250	207.3125	185.92
18.333	208.5669	182.14
18.417	209.7882	177.33
18.500	210.9792	172.94
18.583	212.1482	169.73
18.667	213.2931	166.23
18.750	214.4156	163.00
18.833	215.5158	159.75
18.917	216.5888	155.80
19.000	217.6391	152.50
19.083	218.6677	149.36
19.167	219.6760	146.40
19.250	220.6678	144.00
19.333	221.6414	141.37
19.417	222.5955	138.53
19.500	223.5354	136.47
19.583	224.4630	134.69
19.667	225.3776	132.79
19.750	226.2747	130.26
19.833	227.1399	125.63
19.917	227.9827	122.38
20.000	228.8133	120.60



FLOW PROCESS FROM NODE 1.05 TO NODE 1.07 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS(Reference: the National Engineering Handbook, Hydrology, Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 20.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 4120.00
DOWNSTREAM ELEVATION = 3840.00
CHANNEL LENGTH(FT) = 9900.00 MANNING'S FACTOR = .045
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 595.58
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 400.90
CHANNEL NORMAL VELOCITY FOR Q = 400.90 CFS = 7.61 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .817

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE UNIT INTERVALS IS CSTAR = .588

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	156.0	144.2	144.2
14.167	164.6	146.3	146.3

14.250	177.6	148.5	148.5
14.333	195.1	151.4	151.4
14.417	211.3	156.4	156.4
14.500	226.3	164.7	164.7
14.583	237.7	176.9	176.9
14.667	246.5	191.9	191.9
14.750	254.2	207.3	207.3
14.833	261.1	221.5	221.5
14.917	267.6	233.4	233.4
15.000	273.9	243.2	243.2
15.083	280.0	251.5	251.5
15.167	286.1	258.9	258.9
15.250	292.2	265.7	265.7
15.333	298.5	272.1	272.1
15.417	301.3	278.4	278.4
15.500	298.2	284.6	284.6
15.583	288.6	290.8	290.8
15.667	272.8	296.1	296.1
15.750	260.9	298.3	298.3
15.833	253.3	295.7	295.7
15.917	256.3	287.3	287.3
16.000	272.7	275.6	275.6
16.083	334.3	264.9	264.9
16.167	426.4	258.9	258.9
16.250	519.1	261.8	261.8
16.333	595.6	284.7	284.7
16.417	564.9	338.4	338.4
16.500	531.0	414.9	414.9
16.583	459.3	496.6	496.6
16.667	416.4	546.6	546.6
16.750	398.0	548.3	548.3
16.833	386.5	519.0	519.0
16.917	377.9	472.4	472.4
17.000	370.3	434.6	434.6
17.083	360.0	410.0	410.0
17.167	345.8	393.9	393.9
17.250	327.9	382.5	382.5
17.333	305.9	372.6	372.6
17.417	285.7	361.4	361.4
17.500	266.1	347.4	347.4
17.583	251.1	330.1	330.1
17.667	238.8	310.5	310.5
17.750	227.9	290.7	290.7
17.833	219.3	272.2	272.2
17.917	211.1	256.5	256.5
18.000	201.7	243.2	243.2
18.083	195.6	231.9	231.9
18.167	190.5	222.3	222.3
18.250	185.9	213.2	213.2
18.333	182.1	204.8	204.8
18.417	177.3	198.1	198.1
18.500	172.9	192.4	192.4
18.583	169.7	187.6	187.6
18.667	166.2	183.1	183.1
18.750	163.0	178.5	178.5
18.833	159.7	174.4	174.4
18.917	155.8	170.7	170.7
19.000	152.5	167.2	167.2

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 263.946 AF
OUTFLOW VOLUME = 263.946 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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                      Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*              HYDROGRAPH AT NODE 1.07 ROUTED TO NODE 1.09               *
*                                                                        *
 **************************************************************************

  FILE NAME: H107-118.INP
  TIME/DATE OF STUDY: 15:24   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.07 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =     940.110 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =     .828 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .600
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .123
        LOW LOSS FRACTION =  .103
        *HYDROGRAPH MODEL #1 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  10.064


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                  .948                107.806
       2                 2.966                229.441
       3                 5.788                320.800
       4                 9.409                411.707
       5                14.870                620.877
       6                21.488                752.383
       7                28.428                789.081
       8                34.718                715.120
       9                40.620                671.050
      10                47.157                743.242
      11                52.443                600.955
      12                56.519                463.453
      13                59.992                394.865
      14                62.927                333.669
      15                65.541                297.154
      16                67.757                251.974
      17                69.701                221.063
      18                71.473                201.445
      19                73.021                176.023
      20                74.516                169.979
      21                75.844                150.979
      22                77.062                138.520
      23                78.231                132.832
```

24	79.268	117.873
25	80.248	111.502
26	81.130	100.214
27	81.958	94.143
28	82.764	91.643
29	83.500	83.733
30	84.230	82.918
31	84.884	74.366
32	85.500	70.112
33	86.099	68.051
34	86.646	62.218
35	87.178	60.467
36	87.644	53.017
37	88.085	50.110
38	88.521	49.567
39	88.944	48.121
40	89.364	47.682
41	89.712	39.616
42	90.032	36.388
43	90.352	36.386
44	90.672	36.399
45	90.991	36.289
46	91.298	34.853
47	91.600	34.324
48	91.902	34.331
49	92.204	34.340
50	92.502	33.915
51	92.753	28.482
52	92.990	26.967
53	93.227	26.907
54	93.464	26.960
55	93.699	26.794
56	93.922	25.305
57	94.141	24.868
58	94.359	24.855
59	94.578	24.894
60	94.795	24.591
61	94.989	22.114
62	95.177	21.406
63	95.366	21.433
64	95.555	21.486
65	95.738	20.844
66	95.901	18.573
67	96.061	18.176
68	96.222	18.216
69	96.381	18.183
70	96.539	17.924
71	96.679	15.847
72	96.814	15.449
73	96.950	15.449
74	97.086	15.423
75	97.223	15.608
76	97.369	16.615
77	97.517	16.825
78	97.665	16.799
79	97.813	16.826
80	97.952	15.767
81	98.021	7.850
82	98.081	6.883
83	98.142	6.885
84	98.202	6.831
85	98.263	6.884
86	98.323	6.884
87	98.383	6.831
88	98.444	6.884
89	98.504	6.884
90	98.564	6.831
91	98.625	6.884
92	98.685	6.884
93	98.746	6.831
94	98.806	6.884
95	98.866	6.831
96	98.927	6.938
97	98.987	6.778
98	99.048	6.937
99	99.108	6.831
100	99.162	6.142
101	99.192	3.442
102	99.221	3.230
103	99.249	3.283
104	99.278	3.230
105	99.307	3.283
106	99.335	3.230
107	99.363	3.177
108	99.392	3.229
109	99.423	3.602
110	99.452	3.229
111	99.480	3.230
112	99.508	3.229
113	99.537	3.230
114	99.565	3.230
115	99.594	3.229
116	99.622	3.230
117	99.650	3.229
118	99.679	3.230
119	99.707	3.230
120	99.736	3.229
121	99.764	3.230
122	99.792	3.229
123	99.821	3.230

124	99.849	3.230
125	99.878	3.229
126	99.906	3.230
127	99.935	3.229
128	99.963	3.230
129	99.991	3.230
130	100.000	.982

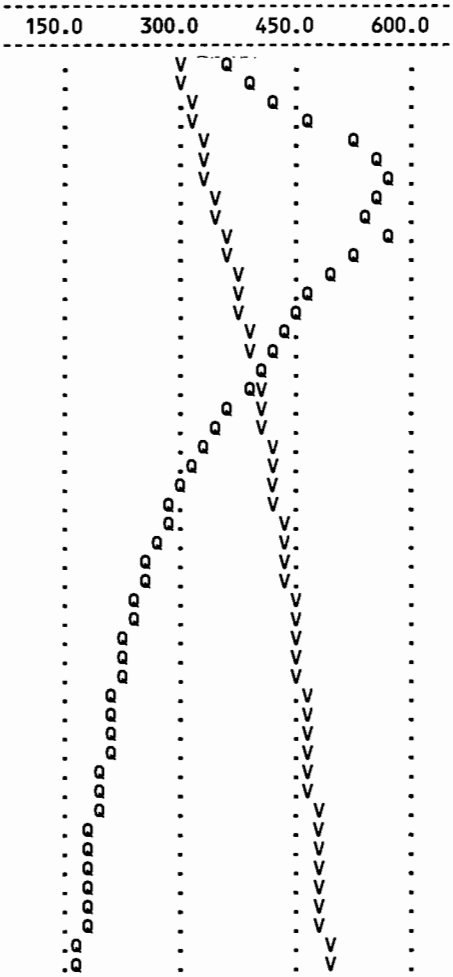
TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = .47
TOTAL EFFECTIVE RAINFALL(INCHES) = 4.29

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 36.8126
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 335.6853

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)
16.083	172.1529	367.16
16.167	174.9173	401.39
16.250	177.8962	432.53
16.333	181.1169	467.64
16.417	184.7596	528.92
16.500	188.6693	567.69
16.583	192.6499	577.99
16.667	196.5177	561.60
16.750	200.3381	554.73
16.833	204.2678	570.59
16.917	207.9533	535.14
17.000	211.3924	499.35
17.083	214.6903	478.86
17.167	217.8736	462.22
17.250	220.9602	448.17
17.333	223.9180	429.47
17.417	226.7471	410.79
17.500	229.4508	392.58
17.583	232.0177	372.71
17.667	234.4808	357.64
17.750	236.8237	340.18
17.833	239.0496	323.20
17.917	241.1811	309.51
18.000	243.2189	295.88
18.083	245.1828	285.16
18.167	247.0739	274.59
18.250	248.9061	266.04
18.333	250.6904	259.08
18.417	252.4242	251.75
18.500	254.1206	246.31
18.583	255.7709	239.63
18.667	257.3832	234.10
18.750	258.9634	229.45
18.833	260.5089	224.41
18.917	262.0248	220.11
19.000	263.5036	214.71
19.083	264.9536	210.54
19.167	266.3798	207.09
19.250	267.7813	203.50
19.333	269.1581	199.90
19.417	270.4993	194.75
19.500	271.8142	190.93
19.583	273.1106	188.24
19.667	274.3899	185.75
19.750	275.6512	183.13
19.833	276.8927	180.28
19.917	278.1166	177.71
20.000	279.3249	175.43



FLOW PROCESS FROM NODE 1.07 TO NODE 1.09 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS(Reference: the National Engineering Handbook, Hydrology, Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 25.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3840.00
DOWNSTREAM ELEVATION = 3640.00
CHANNEL LENGTH(FT) = 9000.00 MANNING'S FACTOR = .040
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 577.99
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 402.82
CHANNEL NORMAL VELOCITY FOR Q = 402.82 CFS = 7.32 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .812

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE UNIT INTERVALS IS CSTAR = .590

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	183.9	172.9	172.9
14.167	189.7	175.1	175.1

14.250	196.8	177.4	177.4
14.333	205.3	180.4	180.4
14.417	216.7	184.8	184.8
14.500	230.0	190.5	190.5
14.583	243.8	197.6	197.6
14.667	256.7	206.7	206.7
14.750	269.0	217.9	217.9
14.833	282.5	230.5	230.5
14.917	294.0	243.5	243.5
15.000	303.9	256.2	256.2
15.083	312.9	269.1	269.1
15.167	321.3	281.6	281.6
15.250	329.4	292.8	292.8
15.333	337.2	302.9	302.9
15.417	342.5	312.2	312.2
15.500	345.1	320.8	320.8
15.583	346.0	329.0	329.0
15.667	345.6	335.9	335.9
15.750	341.3	340.8	340.8
15.833	335.4	343.7	343.7
15.917	331.7	344.9	344.9
16.000	335.0	343.6	343.6
16.083	367.2	339.9	339.9
16.167	401.4	335.8	335.8
16.250	432.5	334.7	334.7
16.333	467.6	347.7	347.7
16.417	528.9	372.8	372.8
16.500	567.7	402.1	402.1
16.583	578.0	434.0	434.0
16.667	561.6	478.2	478.2
16.750	554.7	523.6	523.6
16.833	570.6	553.7	553.7
16.917	535.1	561.5	561.5
17.000	499.3	558.8	558.8
17.083	478.9	562.7	562.7
17.167	462.2	553.3	553.3
17.250	448.2	528.3	528.3
17.333	429.5	503.1	503.1
17.417	410.8	482.2	482.2
17.500	392.6	464.8	464.8
17.583	372.7	447.6	447.6
17.667	357.6	429.5	429.5
17.750	340.2	411.2	411.2
17.833	323.2	392.3	392.3
17.917	309.5	374.8	374.8
18.000	295.9	357.7	357.7
18.083	285.2	340.6	340.6
18.167	274.6	324.9	324.9
18.250	266.0	310.4	310.4
18.333	259.1	297.6	297.6
18.417	251.7	286.0	286.0
18.500	246.3	275.9	275.9
18.583	239.6	267.3	267.3
18.667	234.1	259.5	259.5
18.750	229.4	252.8	252.8
18.833	224.4	246.3	246.3
18.917	220.1	240.2	240.2
19.000	214.7	234.7	234.7

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PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 335.685 AF
OUTFLOW VOLUME = 335.685 AF
LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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

          F L O O D   R O U T I N G   A N A L Y S I S
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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*                HYDROGRAPH AT NODE 1.09 ROUTED TO NODE 1.12             *
*                                                                        *
 **************************************************************************

  FILE NAME: H109-118.INP
  TIME/DATE OF STUDY: 15:34   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.09 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    2338.360 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.170 HOURS
         VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .500
         VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .202
         LOW LOSS FRACTION =  .215
         *HYDROGRAPH MODEL #2 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.245


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                 1.292               182.718
       2                 4.475               450.008
       3                 9.320               685.075
       4                17.034              1090.721
       5                26.335              1315.141
       6                35.252              1260.883
       7                44.619              1324.487
       8                53.142              1205.142
       9                58.964               823.170
      10                63.510               642.796
      11                67.257               529.851
      12                70.246               422.666
      13                72.806               361.941
      14                75.011               311.850
      15                76.979               278.136
      16                78.710               244.765
      17                80.254               218.331
      18                81.637               195.546
      19                82.847               171.148
      20                83.989               161.462
      21                85.025               146.562
      22                85.982               135.253
      23                86.845               122.001
```

24	87.641	112.527
25	88.377	104.128
26	89.007	89.090
27	89.609	85.106
28	90.186	81.624
29	90.698	72.346
30	91.123	60.094
31	91.547	60.011
32	91.970	59.726
33	92.373	57.033
34	92.772	56.389
35	93.171	56.410
36	93.532	51.138
37	93.847	44.532
38	94.162	44.450
39	94.474	44.163
40	94.768	41.511
41	95.057	40.848
42	95.345	40.815
43	95.618	38.630
44	95.868	35.249
45	96.095	32.208
46	96.319	31.586
47	96.523	28.934
48	96.723	28.181
49	96.922	28.200
50	97.111	26.722
51	97.282	24.207
52	97.453	24.168
53	97.625	24.283
54	97.807	25.758
55	97.992	26.184
56	98.177	26.165
57	98.323	20.611
58	98.395	10.198
59	98.467	10.081
60	98.538	10.042
61	98.609	10.101
62	98.680	10.081
63	98.751	10.043
64	98.823	10.080
65	98.894	10.082
66	98.965	10.041
67	99.036	10.082
68	99.108	10.080
69	99.179	10.082
70	99.250	10.041
71	99.309	8.414
72	99.343	4.808
73	99.377	4.730
74	99.411	4.769
75	99.444	4.692
76	99.478	4.769
77	99.513	5.002
78	99.547	4.768
79	99.580	4.770
80	99.614	4.768
81	99.648	4.770
82	99.682	4.768
83	99.715	4.770
84	99.749	4.768
85	99.783	4.770
86	99.816	4.768
87	99.850	4.770
88	99.884	4.768
89	99.918	4.770
90	99.951	4.768
91	99.985	4.770
92	100.000	2.099

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = .98
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.77

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 191.6479
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 734.9275

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      300.0     600.0     900.0    1200.0
--------------------------------------------------------------------------
  16.083    350.5294    766.95  .         .        V.    Q    .         .
  16.167    355.8115    766.95  .         .        V.    Q    .         .
  16.250    361.6180    843.10  .         .        V.       Q .         .
  16.333    367.4244    843.10  .         .        V.       Q .         .
  16.417    373.7512    918.65  .         .         V         Q         .
  16.500    380.0780    918.65  .         .         V         Q         .
  16.583    387.1870   1032.23  .         .         .V        .   Q     .
  16.667    394.2961   1032.23  .         .         .V        .   Q     .
  16.750    401.8546   1097.49  .         .         .V        .     Q   .
  16.833    409.4131   1097.49  .         .         . V       .     Q   .
  16.917    417.0243   1105.15  .         .         . V       .     Q   .
  17.000    424.6355   1105.15  .         .         .  V      .     Q   .
  17.083    432.4025   1127.77  .         .         .  V      .      Q  .
  17.167    440.1695   1127.77  .         .         .  V      .      Q  .
  17.250    447.5974   1078.54  .         .         .   V     .    Q    .
  17.333    455.0254   1078.54  .         .         .   V     .    Q    .
  17.417    461.6870    967.28  .         .         .    V    . Q       .
  17.500    468.3487    967.28  .         .         .    V    . Q       .
  17.583    474.5294    897.43  .         .         .    V   Q.         .
  17.667    480.7101    897.43  .         .         .     V  Q.         .
  17.750    486.4150    828.36  .         .         .     VQ  .         .
  17.833    492.1199    828.36  .         .         .     VQ  .         .
  17.917    497.3574    760.49  .         .         .    Q V  .         .
  18.000    502.5949    760.49  .         .         .    Q V  .         .
  18.083    507.4304    702.11  .         .         .  Q   V  .         .
  18.167    512.2659    702.11  .         .         .  Q   V  .         .
  18.250    516.7335    648.70  .         .         .Q      V .         .
  18.333    521.2012    648.70  .         .         .Q      V .         .
  18.417    525.3958    609.06  .         .         Q       V .         .
  18.500    529.5903    609.06  .         .         Q       V .         .
  18.583    533.5494    574.86  .         .        Q.        V.         .
  18.667    537.5084    574.86  .         .        Q.        V.         .
  18.750    541.2701    546.20  .         .       Q .        V.         .
  18.833    545.0317    546.20  .         .       Q .        V.         .
  18.917    548.6205    521.09  .         .      Q  .        V.         .
  19.000    552.2092    521.09  .         .      Q  .         V         .
  19.083    555.6432    498.61  .         .     Q   .         V         .
  19.167    559.0771    498.61  .         .     Q   .         V         .
  19.250    562.3907    481.12  .         .     Q   .         V         .
  19.333    565.7042    481.12  .         .     Q   .         V         .
  19.417    568.8917    462.81  .         .    Q    .         V         .
  19.500    572.0791    462.81  .         .    Q    .          V        .
  19.583    575.1559    446.75  .         .   Q     .         .V        .
  19.667    578.2327    446.75  .         .   Q     .         .V        .
  19.750    581.2017    431.11  .         .   Q     .         .V        .
  19.833    584.1708    431.11  .         .   Q     .         .V        .
  19.917    587.0428    417.03  .         .  Q      .         .V        .
  20.000    589.9149    417.03  .         .  Q      .         . V       .

**************************************************************************
 FLOW PROCESS FROM NODE     1.09 TO NODE     1.12 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   35.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3640.00
          DOWNSTREAM ELEVATION =    3470.00
          CHANNEL LENGTH(FT) =    9700.00     MANNING'S FACTOR =  .035
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1127.77
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   818.11
          CHANNEL NORMAL VELOCITY FOR Q =   818.11 CFS =   8.64 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .836

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .627


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                OUTFLOW LESS
         MODEL        INFLOW      ROUTED        LOSS
          TIME      (STREAM 1)    FLOW      (STREAM 1)
         (HRS)       (CFS)       (CFS)        (CFS)
         14.083        383.3       359.5        359.5
         14.167        383.3       365.1        365.1
```

14.250	404.3	367.9	367.9
14.333	404.3	376.4	376.4
14.417	431.7	380.7	380.7
14.500	431.7	393.8	393.8
14.583	469.6	400.4	400.4
14.667	469.6	417.9	417.9
14.750	513.5	426.6	426.6
14.833	513.5	450.5	450.5
14.917	556.9	462.5	462.5
15.000	556.9	491.0	491.0
15.083	602.8	505.1	505.1
15.167	602.8	534.1	534.1
15.250	646.9	548.4	548.4
15.333	646.9	578.8	578.8
15.417	676.5	593.8	593.8
15.500	676.5	623.6	623.6
15.583	694.4	638.2	638.2
15.667	694.4	659.8	659.8
15.750	705.9	670.3	670.3
15.833	705.9	684.0	684.0
15.917	714.0	690.5	690.5
16.000	714.0	699.2	699.2
16.083	767.0	703.4	703.4
16.167	767.0	709.4	709.4
16.250	843.1	712.2	712.2
16.333	843.1	742.3	742.3
16.417	918.7	757.8	757.8
16.500	918.7	805.2	805.2
16.583	1032.2	829.0	829.0
16.667	1032.2	879.2	879.2
16.750	1097.5	903.9	903.9
16.833	1097.5	975.3	975.3
16.917	1105.1	1011.0	1011.0
17.000	1105.1	1060.0	1060.0
17.083	1127.8	1083.5	1083.5
17.167	1127.8	1096.5	1096.5
17.250	1078.5	1101.9	1101.9
17.333	1078.5	1116.3	1116.3
17.417	967.3	1123.5	1123.5
17.500	967.3	1099.2	1099.2
17.583	897.4	1086.3	1086.3
17.667	897.4	1020.5	1020.5
17.750	828.4	987.1	987.1
17.833	828.4	936.5	936.5
17.917	760.5	912.0	912.0
18.000	760.5	865.1	865.1
18.083	702.1	842.0	842.0
18.167	702.1	796.3	796.3
18.250	648.7	773.9	773.9
18.333	648.7	733.5	733.5
18.417	609.1	713.8	713.8
18.500	609.1	677.3	677.3
18.583	574.9	659.4	659.4
18.667	574.9	631.0	631.0
18.750	546.2	617.2	617.2
18.833	546.2	593.4	593.4
18.917	521.1	581.8	581.8
19.000	521.1	561.8	561.8

==========

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 734.927 AF

OUTFLOW VOLUME = 734.927 AF

LOSS VOLUME = .000 AF

==========

END OF FLOOD ROUTING ANALYSIS

118-2(

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

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 ************************** DESCRIPTION OF STUDY **************************
 *                          DESIGN NODE 1.18                              *
 *            HYDROGRAPH AT NODE 1.12 ROUTED TO NODE 1.13                 *
 *                                                                        *
 ****************************************************************************

  FILE NAME: H112-118.INP
  TIME/DATE OF STUDY: 15:39   6/25/1992

*****************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.12 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
=============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3489.290 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.480 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .500
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .218
         LOW LOSS FRACTION =  .238
         *HYDROGRAPH MODEL #2 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  11.261


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

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

-----------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
-----------------------------------------------------------------------------
       1                1.005               212.034
       2                3.233               470.005
       3                6.397               667.768
       4               10.887               947.337
       5               17.391              1372.271
       6               24.780              1558.983
       7               31.963              1515.611
       8               38.840              1450.945
       9               46.836              1687.055
      10               53.316              1367.394
      11               58.193              1028.980
      12               62.221               849.802
      13               65.620               717.133
      14               68.511               609.932
      15               70.906               505.387
      16               73.027               447.549
      17               74.850               384.619
      18               76.563               361.377
      19               78.041               311.998
      20               79.391               284.852
      21               80.633               262.017
      22               81.728               230.920
      23               82.731               211.796
```

24	83.627	188.919
25	84.501	184.361
26	85.294	167.425
27	86.070	163.700
28	86.755	144.625
29	87.415	139.095
30	88.024	128.485
31	88.598	121.085
32	89.107	107.449
33	89.564	96.517
34	90.015	95.075
35	90.446	91.018
36	90.863	88.010
37	91.196	70.246
38	91.514	66.985
39	91.831	67.025
40	92.149	66.977
41	92.456	64.847
42	92.755	62.960
43	93.053	62.941
44	93.351	62.998
45	93.638	60.374
46	93.880	51.245
47	94.119	50.261
48	94.357	50.240
49	94.595	50.155
50	94.821	47.793
51	95.041	46.454
52	95.261	46.399
53	95.481	46.493
54	95.694	44.840
55	95.877	38.668
56	96.047	35.870
57	96.217	35.868
58	96.387	35.764
59	96.543	33.048
60	96.695	32.074
61	96.848	32.111
62	96.999	32.028
63	97.144	30.429
64	97.273	27.379
65	97.403	27.269
66	97.532	27.380
67	97.663	27.490
68	97.801	29.248
69	97.942	29.682
70	98.083	29.687
71	98.224	29.722
72	98.326	21.567
73	98.382	11.893
74	98.438	11.857
75	98.495	11.893
76	98.551	11.856
77	98.607	11.893
78	98.663	11.856
79	98.720	11.931
80	98.776	11.856
81	98.832	11.856
82	98.889	11.931
83	98.945	11.854
84	99.001	11.857
85	99.058	11.930
86	99.114	11.856
87	99.171	11.931
88	99.226	11.783
89	99.283	11.854
90	99.318	7.540
91	99.345	5.562
92	99.371	5.636
93	99.398	5.636
94	99.424	5.562
95	99.451	5.563
96	99.477	5.562
97	99.505	5.855
98	99.531	5.563
99	99.558	5.562
100	99.584	5.562
101	99.610	5.563
102	99.637	5.563
103	99.663	5.562
104	99.689	5.562
105	99.716	5.563
106	99.742	5.563
107	99.769	5.562
108	99.795	5.562
109	99.821	5.563
110	99.848	5.563
111	99.874	5.562
112	99.900	5.562
113	99.927	5.563
114	99.953	5.563
115	99.979	5.562
116	100.000	4.325

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.09
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.67

```
------------------------------------------------------------------------
    TOTAL SOIL-LOSS VOLUME(ACRE-FEET) =     316.2971
    TOTAL STORM RUNOFF VOLUME(ACRE-FEET) =    1066.3500
------------------------------------------------------------------------
```

118·210

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      400.0     800.0     1200.0    1600.0
--------------------------------------------------------------------------
  16.083    478.5255   1054.07  .         .      V  .      Q   .         .
  16.167    485.7849   1054.07  .         .       V .      Q   .         .
  16.250    493.5529   1127.92  .         .       V .        Q .         .
  16.333    501.3210   1127.92  .         .       V .        Q .         .
  16.417    509.5663   1197.22  .         .        V.         Q.         .
  16.500    517.8115   1197.22  .         .        V.         Q.         .
  16.583    526.7542   1298.47  .         .        V.          . Q       .
  16.667    535.6968   1298.47  .         .         V          . Q       .
  16.750    545.4137   1410.89  .         .         V          .    Q    .
  16.833    555.1306   1410.89  .         .         V          .    Q    .
  16.917    565.2014   1462.27  .         .         .V         .     Q   .
  17.000    575.2721   1462.27  .         .         .V         .     Q   .
  17.083    585.3650   1465.49  .         .         .V         .     Q   .
  17.167    595.4579   1465.49  .         .         . V        .     Q   .
  17.250    605.5872   1470.78  .         .         . V        .     Q   .
  17.333    615.7166   1470.78  .         .         .  V       .     Q   .
  17.417    626.1279   1511.72  .         .         .  V       .      Q  .
  17.500    636.5392   1511.72  .         .         .  V       .      Q  .
  17.583    646.1693   1398.28  .         .         .   V      .   Q     .
  17.667    655.7993   1398.28  .         .         .   V      .   Q     .
  17.750    664.6501   1285.14  .         .         .   V      . Q       .
  17.833    673.5010   1285.14  .         .         .    V     . Q       .
  17.917    681.7657   1200.04  .         .         .    V     Q         .
  18.000    690.0304   1200.04  .         .         .    V     Q         .
  18.083    697.7492   1120.77  .         .         .     V Q .         .
  18.167    705.4680   1120.77  .         .         .     V Q .         .
  18.250    712.6705   1045.79  .         .         .     Q   .         .
  18.333    719.8729   1045.79  .         .         .     QV  .         .
  18.417    726.5355    967.40  .         .         .   Q  V  .         .
  18.500    733.1980    967.40  .         .         .   Q  V  .         .
  18.583    739.4447    907.02  .         .         . Q    V  .         .
  18.667    745.6914    907.02  .         .         . Q    V  .         .
  18.750    751.5778    854.70  .         .         .Q      V .         .
  18.833    757.4641    854.70  .         .         .Q      V .         .
  18.917    763.0859    816.28  .         .         Q       V .         .
  19.000    768.7076    816.28  .         .         Q       V .         .
  19.083    774.0471    775.29  .         .        Q.        V.         .
  19.167    779.3866    775.29  .         .        Q.        V.         .
  19.250    784.5076    743.56  .         .       Q .        V.         .
  19.333    789.6285    743.56  .         .       Q .        V.         .
  19.417    794.5523    714.93  .         .      Q  .        V.         .
  19.500    799.4761    714.93  .         .      Q  .        V.         .
  19.583    804.2039    686.47  .         .      Q  .         V         .
  19.667    808.9316    686.47  .         .      Q  .         V         .
  19.750    813.4921    662.18  .         .     Q   .         V         .
  19.833    818.0526    662.18  .         .     Q   .         V         .
  19.917    822.4515    638.71  .         .    Q    .         V         .
  20.000    826.8503    638.71  .         .    Q    .          V        .

*************************************************************************
  FLOW PROCESS FROM NODE     1.12 TO NODE     1.13 IS CODE =  52
-------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   50.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3470.00
          DOWNSTREAM ELEVATION =    3375.00
          CHANNEL LENGTH(FT) =    7000.00     MANNING'S FACTOR =  .040
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1511.72
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1108.49
          CHANNEL NORMAL VELOCITY FOR Q =  1108.49 CFS =   7.42 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .814

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .631


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
         MODEL        INFLOW     ROUTED      LOSS
          TIME      (STREAM 1)    FLOW     (STREAM 1)
         (HRS)       (CFS)       (CFS)       (CFS)
         14.083       530.0       504.7       504.7
         14.167       530.0       510.2       510.2
```

14.250	553.8	516.8	516.8
14.333	553.8	525.2	525.2
14.417	583.4	534.9	534.9
14.500	583.4	546.8	546.8
14.583	620.5	559.5	559.5
14.667	620.5	574.6	574.6
14.750	668.6	590.5	590.5
14.833	668.6	609.4	609.4
14.917	722.0	629.8	629.8
15.000	722.0	654.3	654.3
15.083	775.6	678.2	678.2
15.167	775.6	705.9	705.9
15.250	829.3	731.0	731.0
15.333	829.3	759.2	759.2
15.417	882.4	784.5	784.5
15.500	882.4	812.8	812.8
15.583	921.7	838.0	838.0
15.667	921.7	866.1	866.1
15.750	951.4	887.3	887.3
15.833	951.4	909.0	909.0
15.917	982.3	925.3	925.3
16.000	982.3	941.7	941.7
16.083	1054.1	956.5	956.5
16.167	1054.1	972.8	972.8
16.250	1127.9	998.8	998.8
16.333	1127.9	1033.7	1033.7
16.417	1197.2	1067.1	1067.1
16.500	1197.2	1105.5	1105.5
16.583	1298.5	1139.0	1139.0
16.667	1298.5	1175.7	1175.7
16.750	1410.9	1217.5	1217.5
16.833	1410.9	1268.6	1268.6
16.917	1462.3	1318.8	1318.8
17.000	1462.3	1376.9	1376.9
17.083	1465.5	1412.7	1412.7
17.167	1465.5	1444.0	1444.0
17.250	1470.8	1456.4	1456.4
17.333	1470.8	1462.1	1462.1
17.417	1511.7	1465.7	1465.7
17.500	1511.7	1468.9	1468.9
17.583	1398.3	1481.5	1481.5
17.667	1398.3	1500.6	1500.6
17.750	1285.1	1476.0	1476.0
17.833	1285.1	1426.9	1426.9
17.917	1200.0	1377.3	1377.3
18.000	1200.0	1319.1	1319.1
18.083	1120.8	1273.9	1273.9
18.167	1120.8	1227.3	1227.3
18.250	1045.8	1188.0	1188.0
18.333	1045.8	1145.6	1145.6
18.417	967.4	1109.0	1109.0
18.500	967.4	1069.1	1069.1
18.583	907.0	1032.5	1032.5
18.667	907.0	991.4	991.4
18.750	854.7	959.4	959.4
18.833	854.7	926.3	926.3
18.917	816.3	899.6	899.6
19.000	816.3	871.2	871.2

==========

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1066.350 AF
OUTFLOW VOLUME = 1066.350 AF
LOSS VOLUME = .000 AF

==========

END OF FLOOD ROUTING ANALYSIS

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

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

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*                HYDROGRAPH AT NODE 1.13 ROUTED TO NODE 1.14             *
*                                                                        *
 ************************************************************************

  FILE NAME: H113-118.INP
  TIME/DATE OF STUDY: 15:44   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.13 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    3715.180 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.744 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .300
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .050
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .225
        LOW LOSS FRACTION =  .248
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.335


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1                1.103               165.210
        2                3.811               405.580
        3                8.009               628.744
        4               14.721              1005.277
        5               22.980              1236.918
        6               31.794              1320.030
        7               43.264              1717.862
        8               54.334              1657.878
        9               61.470              1068.704
       10               67.062               837.545
       11               71.485               662.481
       12               74.980               523.355
       13               77.860               431.306
       14               80.293               364.430
       15               82.337               306.197
       16               84.069               259.313
       17               85.571               224.995
       18               86.828               188.259
       19               87.908               161.745
       20               88.921               151.770
       21               89.845               138.317
       22               90.680               125.045
       23               91.443               114.250
```

24	92.115	100.627
25	92.698	87.341
26	93.190	73.757
27	93.650	68.928
28	94.066	62.292
29	94.397	49.564
30	94.670	40.788
31	94.942	40.796
32	95.210	40.192
33	95.463	37.827
34	95.714	37.567
35	95.964	37.497
36	96.176	31.787
37	96.373	29.464
38	96.570	29.476
39	96.764	29.124
40	96.951	27.863
41	97.136	27.749
42	97.321	27.722
43	97.493	25.849
44	97.659	24.748
45	97.812	22.968
46	97.931	17.878
47	98.043	16.647
48	98.153	16.515
49	98.263	16.509
50	98.362	14.837
51	98.455	13.953
52	98.549	13.964
53	98.644	14.233
54	98.745	15.188
55	98.847	15.236
56	98.948	15.103
57	99.010	9.306
58	99.053	6.441
59	99.096	6.440
60	99.139	6.440
61	99.182	6.427
62	99.225	6.465
63	99.268	6.416
64	99.311	6.464
65	99.354	6.441
66	99.397	6.415
67	99.440	6.465
68	99.483	6.440
69	99.526	6.416
70	99.568	6.367
71	99.595	4.015
72	99.615	3.037
73	99.635	3.011
74	99.656	3.037
75	99.676	3.036
76	99.696	3.061
77	99.719	3.379
78	99.739	3.061
79	99.760	3.061
80	99.780	3.060
81	99.801	3.061
82	99.821	3.061
83	99.842	3.060
84	99.862	3.061
85	99.882	3.061
86	99.903	3.061
87	99.923	3.060
88	99.944	3.061
89	99.964	3.061
90	99.985	3.060
91	100.000	2.309

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.14
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.61

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 354.1872
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1117.9790

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      400.0     800.0     1200.0    1600.0
--------------------------------------------------------------------------
  16.083    487.4184   1069.55  .         .      V  .      Q   .         .
  16.167    494.7845   1069.55  .         .      V  .      Q   .         .
  16.250    502.1505   1069.55  .         .      V  .      Q   .         .
  16.333    510.1734   1164.92  .         .       V .         Q.         .
  16.417    518.1964   1164.92  .         .       V .         Q.         .
  16.500    526.2192   1164.92  .         .       V .         Q.         .
  16.583    534.9016   1260.68  .         .        V.          .Q        .
  16.667    543.5839   1260.68  .         .        V.          .Q        .
  16.750    552.2662   1260.68  .         .        V.          .Q        .
  16.833    561.6903   1368.38  .         .         V          .   Q     .
  16.917    571.1144   1368.38  .         .         V          .   Q     .
  17.000    580.5386   1368.38  .         .         V          .   Q     .
  17.083    590.3473   1424.22  .         .         .V         .    Q    .
  17.167    600.1560   1424.22  .         .         .V         .    Q    .
  17.250    609.9647   1424.22  .         .         .V         .    Q    .
  17.333    620.0989   1471.49  .         .         . V        .     Q   .
  17.417    630.2332   1471.49  .         .         . V        .     Q   .
  17.500    640.3674   1471.49  .         .         . V        .     Q   .
  17.583    651.1210   1561.43  .         .         .  V       .        Q.
  17.667    661.8747   1561.43  .         .         .  V       .        Q.
  17.750    672.6284   1561.43  .         .         .   V      .        Q.
  17.833    682.9337   1496.33  .         .         .   V      .      Q  .
  17.917    693.2390   1496.33  .         .         .   V      .      Q  .
  18.000    703.5443   1496.33  .         .         .    V     .      Q  .
  18.083    712.5898   1313.41  .         .         .    V     . Q       .
  18.167    721.6353   1313.41  .         .         .    V     . Q       .
  18.250    730.6808   1313.41  .         .         .     V    . Q       .
  18.333    738.9593   1202.03  .         .         .     V   Q          .
  18.417    747.2377   1202.03  .         .         .     V   Q          .
  18.500    755.5162   1202.03  .         .         .      V  Q          .
  18.583    762.9560   1080.26  .         .         .      Q  .          .
  18.667    770.3958   1080.26  .         .         .      Q  .          .
  18.750    777.8356   1080.26  .         .         .      Q  .          .
  18.833    784.5058    968.51  .         .         .   Q   V .          .
  18.917    791.1760    968.51  .         .         .   Q   V .          .
  19.000    797.8461    968.51  .         .         .   Q   V .          .
  19.083    803.9641    888.32  .         .         . Q     V .          .
  19.167    810.0820    888.32  .         .         . Q     V .          .
  19.250    816.1999    888.32  .         .         . Q      V.          .
  19.333    821.8654    822.64  .         .         Q        V.          .
  19.417    827.5309    822.64  .         .         Q        V.          .
  19.500    833.1965    822.64  .         .         Q        V.          .
  19.583    838.4852    767.92  .         .        Q.         V          .
  19.667    843.7739    767.92  .         .        Q.         V          .
  19.750    849.0626    767.92  .         .        Q.         V          .
  19.833    854.0374    722.34  .         .       Q .         V          .
  19.917    859.0121    722.34  .         .       Q .         V          .
  20.000    863.9869    722.34  .         .       Q .         V          .

**************************************************************************
  FLOW PROCESS FROM NODE     1.13 TO NODE     1.14 IS CODE =  52
--------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   50.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3375.00
          DOWNSTREAM ELEVATION =    3285.00
          CHANNEL LENGTH(FT) =    4200.00     MANNING'S FACTOR =  .035
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1561.43
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1164.07
          CHANNEL NORMAL VELOCITY FOR Q =  1164.07 CFS =   9.55 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .849

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .806


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                OUTFLOW LESS
         MODEL        INFLOW      ROUTED        LOSS
          TIME      (STREAM 1)    FLOW      (STREAM 1)
         (HRS)       (CFS)       (CFS)        (CFS)
         14.083        548.1       526.4        526.4
         14.167        548.1       539.7        539.7
```

14.250	548.1	546.5	546.5
14.333	580.6	547.8	547.8
14.417	580.6	567.8	567.8
14.500	580.6	578.1	578.1
14.583	623.4	580.1	580.1
14.667	623.4	606.5	606.5
14.750	623.4	620.1	620.1
14.833	681.9	622.7	622.7
14.917	681.9	658.9	658.9
15.000	681.9	677.4	677.4
15.083	751.3	681.0	681.0
15.167	751.3	724.0	724.0
15.250	751.3	746.0	746.0
15.333	821.0	750.2	750.2
15.417	821.0	793.6	793.6
15.500	821.0	815.7	815.7
15.583	898.4	820.0	820.0
15.667	898.4	867.9	867.9
15.750	898.4	892.5	892.5
15.833	977.6	897.3	897.3
15.917	977.6	946.4	946.4
16.000	977.6	971.6	971.6
16.083	1069.6	976.5	976.5
16.167	1069.6	1033.4	1033.4
16.250	1069.6	1062.5	1062.5
16.333	1164.9	1068.2	1068.2
16.417	1164.9	1127.4	1127.4
16.500	1164.9	1157.6	1157.6
16.583	1260.7	1163.5	1163.5
16.667	1260.7	1223.0	1223.0
16.750	1260.7	1253.4	1253.4
16.833	1368.4	1259.3	1259.3
16.917	1368.4	1326.0	1326.0
17.000	1368.4	1360.2	1360.2
17.083	1424.2	1366.8	1366.8
17.167	1424.2	1402.1	1402.1
17.250	1424.2	1419.9	1419.9
17.333	1471.5	1423.4	1423.4
17.417	1471.5	1452.8	1452.8
17.500	1471.5	1467.9	1467.9
17.583	1561.4	1470.8	1470.8
17.667	1561.4	1526.1	1526.1
17.750	1561.4	1554.6	1554.6
17.833	1496.3	1560.1	1560.1
17.917	1496.3	1521.5	1521.5
18.000	1496.3	1501.2	1501.2
18.083	1313.4	1497.3	1497.3
18.167	1313.4	1385.1	1385.1
18.250	1313.4	1327.3	1327.3
18.333	1202.0	1316.1	1316.1
18.417	1202.0	1246.1	1246.1
18.500	1202.0	1210.6	1210.6
18.583	1080.3	1203.7	1203.7
18.667	1080.3	1128.2	1128.2
18.750	1080.3	1089.5	1089.5
18.833	968.5	1082.1	1082.1
18.917	968.5	1012.6	1012.6
19.000	968.5	977.0	977.0

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1117.978 AF
OUTFLOW VOLUME = 1117.978 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

          F L O O D    R O U T I N G    A N A L Y S I S
    USING ORANGE/SAN BERNARDINO COUNTY UNIT-HYDROGRAPH (1986 MANUAL)
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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
* HYDROGRAPH AT NOD1 1.14 ROUTED TO NODE 1.16                            *
*                                                                        *
 ************************************************************************

  FILE NAME: H114-118.INP
  TIME/DATE OF STUDY: 15:50   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.14 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =   11095.670 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.866 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .195
        LOW LOSS FRACTION =  .214
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  13.398


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1                1.019               456.015
        2                3.428              1077.247
        3                7.074              1630.994
        4               12.660              2498.646
        5               19.870              3224.621
        6               27.972              3623.999
        7               37.437              4233.645
        8               49.763              5513.586
        9               57.872              3627.179
       10               63.898              2695.260
       11               68.703              2149.053
       12               72.528              1711.090
       13               75.621              1383.516
       14               78.201              1154.177
       15               80.446              1004.177
       16               82.354               853.300
       17               84.001               736.500
       18               85.455               650.333
       19               86.706               559.793
       20               87.787               483.321
       21               88.806               456.061
       22               89.713               405.719
       23               90.572               383.977
```

24	91.319	334.440
25	92.026	316.097
26	92.659	282.924
27	93.197	240.614
28	93.669	211.287
29	94.108	196.271
30	94.514	181.512
31	94.829	141.148
32	95.092	117.461
33	95.354	117.488
34	95.615	116.605
35	95.860	109.551
36	96.101	107.892
37	96.342	107.838
38	96.569	101.227
39	96.764	87.376
40	96.957	86.574
41	97.151	86.434
42	97.337	83.233
43	97.514	79.319
44	97.691	79.291
45	97.868	79.056
46	98.030	72.589
47	98.144	50.789
48	98.251	47.940
49	98.356	47.077
50	98.450	41.709
51	98.541	40.767
52	98.632	40.743
53	98.720	39.409
54	98.801	36.074
55	98.881	35.969
56	98.961	35.917
57	99.045	37.218
58	99.130	38.316
59	99.216	38.344
60	99.300	37.740
61	99.341	18.274
62	99.368	11.947
63	99.395	12.023
64	99.422	11.999
65	99.448	11.947
66	99.475	11.995
67	99.502	11.999
68	99.529	11.947
69	99.556	12.050
70	99.582	11.947
71	99.609	11.944
72	99.636	12.050
73	99.663	11.947
74	99.689	11.999
75	99.715	11.579
76	99.731	6.938
77	99.743	5.634
78	99.756	5.634
79	99.769	5.583
80	99.781	5.685
81	99.794	5.634
82	99.807	6.102
83	99.820	5.634
84	99.833	5.634
85	99.845	5.634
86	99.858	5.634
87	99.870	5.631
88	99.883	5.634
89	99.896	5.634
90	99.908	5.634
91	99.921	5.634
92	99.933	5.631
93	99.946	5.634
94	99.959	5.634
95	99.971	5.634
96	99.984	5.634
97	99.996	5.631
98	100.000	1.614

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = .99
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.77

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 912.9810
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 3483.6810

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24 - HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	1200.0	2400.0	3600.0	4800.0
16.083	1491.5820	3241.66			V	Q	
16.167	1513.9070	3241.66			V	Q	
16.250	1536.2330	3241.66			V	Q	
16.333	1560.5090	3524.87			V	Q	
16.417	1584.7850	3524.87			V	Q	
16.500	1609.0610	3524.87			V	Q	
16.583	1635.1560	3789.01			V	Q	
16.667	1661.2510	3789.01			V	Q	
16.750	1687.3460	3789.01			V	Q	
16.833	1715.5230	4091.25			V	Q	
16.917	1743.6990	4091.25			V	Q	
17.000	1771.8760	4091.25			V	Q	
17.083	1801.2280	4261.92			V	Q	
17.167	1830.5800	4261.92			V	Q	
17.250	1859.9320	4261.92			V	Q	
17.333	1890.1840	4392.58			V	Q	
17.417	1920.4360	4392.58			V	Q	
17.500	1950.6880	4392.58			V	Q	
17.583	1982.5080	4620.30			V	Q	
17.667	2014.3280	4620.30			V	Q	
17.750	2046.1490	4620.30			V	Q	
17.833	2079.0870	4782.59			V	Q	
17.917	2112.0250	4782.59			V	Q	
18.000	2144.9630	4782.59			V	Q	
18.083	2173.9290	4205.89			V	Q	
18.167	2202.8950	4205.89			V	Q	
18.250	2231.8620	4205.89			V	Q	
18.333	2258.3060	3839.78			V	Q	
18.417	2284.7510	3839.78			V	Q	
18.500	2311.1960	3839.78			V	Q	
18.583	2335.3280	3503.91			V	Q	
18.667	2359.4590	3503.91			V	Q	
18.750	2383.5910	3503.91			V	Q	
18.833	2405.1830	3135.22			QV		
18.917	2426.7750	3135.22			QV		
19.000	2448.3680	3135.22			Q	V	
19.083	2468.0650	2859.99		Q		V	
19.167	2487.7620	2859.99		Q		V	
19.250	2507.4590	2859.99		Q		V	
19.333	2525.6770	2645.37		Q		V	
19.417	2543.8960	2645.37		Q		V	
19.500	2562.1150	2645.37		Q		V	
19.583	2579.1460	2472.97		Q		V	
19.667	2596.1780	2472.97		Q		V	
19.750	2613.2090	2472.97		Q		V	
19.833	2629.2220	2325.00		Q		V	
19.917	2645.2340	2325.00		Q		V	
20.000	2661.2470	2325.00		Q		V	

****
FLOW PROCESS FROM NODE 1.14 TO NODE 1.16 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 100.00 CHANNEL Z = 2.00
UPSTREAM ELEVATION = 3285.00
DOWNSTREAM ELEVATION = 3145.00
CHANNEL LENGTH(FT) = 9600.00 MANNING'S FACTOR = .030
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 4782.59
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 3524.89
CHANNEL NORMAL VELOCITY FOR Q = 3524.89 CFS = 11.59 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .872

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .715

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	1688.5	1620.2	1620.2
14.167	1688.5	1624.4	1624.4

14.250	1688.5	1652.0	1652.0
14.333	1782.0	1678.1	1678.1
14.417	1782.0	1685.5	1685.5
14.500	1782.0	1727.2	1727.2
14.583	1903.3	1766.3	1766.3
14.667	1903.3	1777.5	1777.5
14.750	1903.3	1832.0	1832.0
14.833	2064.5	1883.0	1883.0
14.917	2064.5	1897.5	1897.5
15.000	2064.5	1969.8	1969.8
15.083	2260.3	2037.5	2037.5
15.167	2260.3	2056.8	2056.8
15.250	2260.3	2145.1	2145.1
15.333	2463.7	2227.5	2227.5
15.417	2463.7	2250.9	2250.9
15.500	2463.7	2343.7	2343.7
15.583	2673.5	2429.5	2429.5
15.667	2673.5	2454.0	2454.0
15.750	2673.5	2549.7	2549.7
15.833	2943.5	2638.2	2638.2
15.917	2943.5	2663.4	2663.4
16.000	2943.5	2784.9	2784.9
16.083	3241.7	2898.3	2898.3
16.167	3241.7	2930.6	2930.6
16.250	3241.7	3066.0	3066.0
16.333	3524.9	3191.6	3191.6
16.417	3524.9	3227.4	3227.4
16.500	3524.9	3357.4	3357.4
16.583	3789.0	3477.1	3477.1
16.667	3789.0	3511.3	3511.3
16.750	3789.0	3632.7	3632.7
16.833	4091.3	3744.4	3744.4
16.917	4091.3	3776.3	3776.3
17.000	4091.3	3913.3	3913.3
17.083	4261.9	4040.5	4040.5
17.167	4261.9	4076.8	4076.8
17.250	4261.9	4159.3	4159.3
17.333	4392.6	4232.7	4232.7
17.417	4392.6	4253.6	4253.6
17.500	4392.6	4314.8	4314.8
17.583	4620.3	4370.4	4370.4
17.667	4620.3	4386.3	4386.3
17.750	4620.3	4487.1	4487.1
17.833	4782.6	4582.3	4582.3
17.917	4782.6	4609.5	4609.5
18.000	4782.6	4685.9	4685.9
18.083	4205.9	4755.0	4755.0
18.167	4205.9	4774.7	4774.7
18.250	4205.9	4536.4	4536.4
18.333	3839.8	4300.1	4300.1
18.417	3839.8	4232.8	4232.8
18.500	3839.8	4058.7	4058.7
18.583	3503.9	3902.2	3902.2
18.667	3503.9	3857.6	3857.6
18.750	3503.9	3702.7	3702.7
18.833	3135.2	3560.6	3560.6
18.917	3135.2	3520.1	3520.1
19.000	3135.2	3352.5	3352.5

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 3483.681 AF
OUTFLOW VOLUME = 3483.682 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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

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 ************************* DESCRIPTION OF STUDY *************************
*                         DESIGN NODE 1.18                               *
*          HYDROGRAPH AT NODE 1.16 ROUTED TO NODE 1.17                   *
*                                                                        *
 ************************************************************************

  FILE NAME: H116-118.INP
  TIME/DATE OF STUDY: 15:55   6/25/1992


**************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.16 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =   14167.440 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    2.096 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .222
        LOW LOSS FRACTION =   .252
        *HYDROGRAPH MODEL #4 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

        UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.903


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
        1                1.212               519.056
        2                4.336              1338.410
        3                9.483              2204.423
        4               17.230              3318.265
        5               26.666              4041.854
        6               37.893              4809.401
        7               51.774              5945.486
        8               60.459              3720.290
        9               66.830              2728.830
       10               71.733              2100.424
       11               75.510              1617.773
       12               78.546              1300.502
       13               81.132              1107.490
       14               83.231               899.224
       15               85.060               783.651
       16               86.583               652.189
       17               87.876               553.740
       18               89.061               507.841
       19               90.119               453.171
       20               91.060               402.808
       21               91.913               365.631
       22               92.671               324.604
       23               93.295               267.470
```

24	93.849	236.907
25	94.345	212.571
26	94.767	180.658
27	95.080	134.357
28	95.392	133.514
29	95.697	130.799
30	95.985	123.119
31	96.271	122.602
32	96.545	117.491
33	96.763	93.092
34	96.975	90.922
35	97.186	90.249
36	97.382	84.171
37	97.575	82.779
38	97.768	82.360
39	97.942	74.762
40	98.110	71.903
41	98.278	71.775
42	98.428	64.422
43	98.536	46.314
44	98.644	46.353
45	98.746	43.664
46	98.842	40.844
47	98.937	40.886
48	99.035	41.830
49	99.136	43.540
50	99.238	43.579
51	99.325	37.030
52	99.358	14.369
53	99.390	13.637
54	99.422	13.634
55	99.453	13.615
56	99.485	13.637
57	99.517	13.592
58	99.549	13.637
59	99.581	13.592
60	99.613	13.677
61	99.644	13.595
62	99.676	13.634
63	99.708	13.552
64	99.729	9.216
65	99.744	6.441
66	99.759	6.395
67	99.774	6.395
68	99.789	6.399
69	99.805	6.732
70	99.820	6.399
71	99.835	6.395
72	99.850	6.395
73	99.865	6.399
74	99.880	6.395
75	99.894	6.399
76	99.909	6.395
77	99.924	6.395
78	99.939	6.399
79	99.954	6.395
80	99.969	6.399
81	99.984	6.395
82	99.999	6.395
83	100.000	.438

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.17
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.58

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1384.9260
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 4229.0390

118-222

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1350.0    2700.0    4050.0    5400.0
--------------------------------------------------------------------------
  16.083   1742.0800   3738.62  .         .     V   .      Q  .         .
  16.167   1767.8280   3738.62  .         .     V   .      Q  .         .
  16.250   1793.5760   3738.62  .         .     V   .      Q  .         .
  16.333   1819.3240   3738.62  .         .      V  .      Q  .         .
  16.417   1848.0020   4164.04  .         .      V  .         Q         .
  16.500   1876.6800   4164.04  .         .      V  .         Q         .
  16.583   1905.3580   4164.04  .         .       V .         Q         .
  16.667   1934.0360   4164.04  .         .       V .         Q         .
  16.750   1965.4620   4563.13  .         .       V .         .  Q      .
  16.833   1996.8890   4563.13  .         .       V .         .  Q      .
  16.917   2028.3150   4563.13  .         .        V.         .  Q      .
  17.000   2059.7420   4563.13  .         .        V.         .  Q      .
  17.083   2093.5630   4910.80  .         .        V.         .     Q   .
  17.167   2127.3840   4910.80  .         .         V         .     Q   .
  17.250   2161.2040   4910.80  .         .         V         .     Q   .
  17.333   2195.0250   4910.80  .         .         V         .     Q   .
  17.417   2229.7710   5045.16  .         .         .V        .      Q  .
  17.500   2264.5180   5045.16  .         .         .V        .      Q  .
  17.583   2299.2640   5045.16  .         .         .V        .      Q  .
  17.667   2334.0100   5045.16  .         .         . V       .      Q  .
  17.750   2370.3780   5280.55  .         .         . V       .        Q.
  17.833   2406.7450   5280.55  .         .         . V       .        Q.
  17.917   2443.1130   5280.55  .         .         .  V      .        Q.
  18.000   2479.4800   5280.55  .         .         .  V      .        Q.
  18.083   2516.2280   5335.70  .         .         .  V      .        Q.
  18.167   2552.9750   5335.70  .         .         .   V     .        Q.
  18.250   2589.7220   5335.70  .         .         .   V     .        Q.
  18.333   2626.4690   5335.70  .         .         .   V     .        Q.
  18.417   2658.6610   4674.26  .         .         .    V    .   Q     .
  18.500   2690.8530   4674.26  .         .         .    V    .   Q     .
  18.583   2723.0450   4674.26  .         .         .    V    .   Q     .
  18.667   2755.2370   4674.26  .         .         .     V   .   Q     .
  18.750   2783.9110   4163.46  .         .         .     V   Q         .
  18.833   2812.5850   4163.46  .         .         .     V   Q         .
  18.917   2841.2590   4163.46  .         .         .     V   Q         .
  19.000   2869.9330   4163.46  .         .         .      V  Q         .
  19.083   2895.1230   3657.47  .         .         .      Q  .         .
  19.167   2920.3120   3657.47  .         .         .      Q  .         .
  19.250   2945.5010   3657.47  .         .         .      Q  .         .
  19.333   2970.6900   3657.47  .         .         .      QV .         .
  19.417   2993.2870   3281.12  .         .         .   Q   V .         .
  19.500   3015.8850   3281.12  .         .         .   Q   V .         .
  19.583   3038.4820   3281.12  .         .         .   Q   V .         .
  19.667   3061.0790   3281.12  .         .         .   Q   V .         .
  19.750   3081.7350   2999.31  .         .         . Q      V.         .
  19.833   3102.3920   2999.31  .         .         . Q      V.         .
  19.917   3123.0480   2999.31  .         .         . Q      V.         .
  20.000   3143.7050   2999.31  .         .         . Q      V.         .

**************************************************************************
  FLOW PROCESS FROM NODE     1.16 TO NODE     1.17 IS CODE =  52
--------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =  100.00     CHANNEL Z =  2.00
          UPSTREAM ELEVATION =    3145.00
          DOWNSTREAM ELEVATION =    3070.00
          CHANNEL LENGTH(FT) =    6900.00     MANNING'S FACTOR =  .030
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  5335.70
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  4050.92
          CHANNEL NORMAL VELOCITY FOR Q =  4050.92 CFS =  11.12 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .867

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .759


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
         MODEL        INFLOW     ROUTED      LOSS
          TIME      (STREAM 1)    FLOW     (STREAM 1)
         (HRS)       (CFS)       (CFS)       (CFS)
         14.083       2013.9      1926.4      1926.4
         14.167       2013.9      1940.5      1940.5
```

14.250	2013.9	1996.2	1996.2
14.333	2013.9	2009.6	2009.6
14.417	2158.2	2012.9	2012.9
14.500	2158.2	2036.2	2036.2
14.583	2158.2	2128.8	2128.8
14.667	2158.2	2151.1	2151.1
14.750	2359.2	2156.5	2156.5
14.833	2359.2	2189.2	2189.2
14.917	2359.2	2318.3	2318.3
15.000	2359.2	2349.3	2349.3
15.083	2629.4	2356.8	2356.8
15.167	2629.4	2400.8	2400.8
15.250	2629.4	2574.4	2574.4
15.333	2629.4	2616.2	2616.2
15.417	2919.6	2626.2	2626.2
15.500	2919.6	2674.0	2674.0
15.583	2919.6	2860.5	2860.5
15.667	2919.6	2905.3	2905.3
15.750	3250.1	2916.1	2916.1
15.833	3250.1	2970.4	2970.4
15.917	3250.1	3182.8	3182.8
16.000	3250.1	3233.9	3233.9
16.083	3738.6	3246.2	3246.2
16.167	3738.6	3325.6	3325.6
16.250	3738.6	3639.2	3639.2
16.333	3738.6	3714.7	3714.7
16.417	4164.0	3732.9	3732.9
16.500	4164.0	3803.7	3803.7
16.583	4164.0	4077.3	4077.3
16.667	4164.0	4143.2	4143.2
16.750	4563.1	4159.0	4159.0
16.833	4563.1	4225.2	4225.2
16.917	4563.1	4481.8	4481.8
17.000	4563.1	4543.6	4543.6
17.083	4910.8	4558.4	4558.4
17.167	4910.8	4616.4	4616.4
17.250	4910.8	4839.9	4839.9
17.333	4910.8	4893.7	4893.7
17.417	5045.2	4906.7	4906.7
17.500	5045.2	4930.8	4930.8
17.583	5045.2	5017.6	5017.6
17.667	5045.2	5038.5	5038.5
17.750	5280.6	5043.6	5043.6
17.833	5280.6	5081.6	5081.6
17.917	5280.6	5232.7	5232.7
18.000	5280.6	5269.0	5269.0
18.083	5335.7	5277.8	5277.8
18.167	5335.7	5288.5	5288.5
18.250	5335.7	5324.3	5324.3
18.333	5335.7	5333.0	5333.0
18.417	4674.3	5335.0	5335.0
18.500	4674.3	5232.1	5232.1
18.583	4674.3	4808.5	4808.5
18.667	4674.3	4706.6	4706.6
18.750	4163.5	4682.0	4682.0
18.833	4163.5	4596.3	4596.3
18.917	4163.5	4267.6	4267.6
19.000	4163.5	4188.5	4188.5

```
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =   4229.033 AF
    OUTFLOW VOLUME =   4229.040 AF
    LOSS    VOLUME =       .000 AF
================================================================================

  END OF FLOOD ROUTING ANALYSIS
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          F L O O D   R O U T I N G   A N A L Y S I S
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                         Analysis prepared by:

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 ************************** DESCRIPTION OF STUDY **************************
 *                         DESIGN NODE 1.18                               *
 *          HYDROGRAPH AT NODE 207 ROUTED TO NODE 209                     *
 *                                                                        *
 ****************************************************************************

  FILE NAME: H207-118.INP
  TIME/DATE OF STUDY: 16: 5   6/25/1992

*****************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.07 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
=============================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =      790.000 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =      .830 HOURS
        VALLEY(DEVELOPED):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =    .000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =    .150
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =    .700
        VALLEY(UNDEVELOPED/DESERT):
                "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =    .150
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =    .304
        LOW LOSS FRACTION =  .327
        *HYDROGRAPH MODEL #1 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=    .64
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

        UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  10.040


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

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

-----------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
-----------------------------------------------------------------------------
       1                  .999                95.445
       2                 3.130               203.599
       3                 6.115               285.230
       4                 9.852               356.970
       5                15.467               536.437
       6                22.279               650.916
       7                29.375               677.880
       8                35.641               598.733
       9                41.259               536.730
      10                47.298               576.944
      11                52.052               454.175
      12                55.606               339.597
      13                58.621               288.033
      14                61.139               240.567
      15                63.480               223.627
      16                65.473               190.455
      17                67.255               170.282
      18                68.951               162.005
      19                70.433               141.560
      20                71.888               139.032
      21                73.220               127.243
      22                74.461               118.563
      23                75.671               115.594
```

24	76.748	102.918
25	77.809	101.412
26	78.772	92.017
27	79.668	85.560
28	80.544	83.710
29	81.343	76.346
30	82.133	75.505
31	82.847	68.179
32	83.512	63.503
33	84.161	61.983
34	84.750	56.339
35	85.334	55.759
36	85.860	50.261
37	86.352	46.988
38	86.840	46.659
39	87.315	45.369
40	87.787	45.148
41	88.189	38.313
42	88.550	34.537
43	88.911	34.533
44	89.273	34.540
45	89.634	34.489
46	89.982	33.268
47	90.323	32.607
48	90.665	32.626
49	91.006	32.607
50	91.346	32.476
51	91.637	27.786
52	91.906	25.713
53	92.175	25.687
54	92.444	25.734
55	92.713	25.649
56	92.968	24.375
57	93.217	23.780
58	93.466	23.786
59	93.715	23.781
60	93.963	23.717
61	94.187	21.448
62	94.403	20.553
63	94.617	20.499
64	94.832	20.531
65	95.036	19.448
66	95.225	18.071
67	95.409	17.571
68	95.592	17.518
69	95.776	17.571
70	95.959	17.466
71	96.121	15.542
72	96.277	14.865
73	96.433	14.891
74	96.588	14.839
75	96.744	14.943
76	96.911	15.879
77	97.080	16.218
78	97.250	16.192
79	97.420	16.244
80	97.585	15.750
81	97.678	8.875
82	97.748	6.686
83	97.818	6.740
84	97.888	6.713
85	97.959	6.739
86	98.029	6.661
87	98.100	6.765
88	98.169	6.662
89	98.240	6.765
90	98.310	6.713
91	98.380	6.662
92	98.451	6.765
93	98.521	6.713
94	98.591	6.661
95	98.662	6.765
96	98.732	6.713
97	98.802	6.713
98	98.872	6.713
99	98.943	6.713
100	99.010	6.401
101	99.050	3.851
102	99.083	3.123
103	99.116	3.174
104	99.149	3.174
105	99.182	3.123
106	99.215	3.174
107	99.248	3.175
108	99.282	3.174
109	99.316	3.330
110	99.350	3.174
111	99.383	3.174
112	99.416	3.174
113	99.449	3.174
114	99.483	3.174
115	99.516	3.174
116	99.549	3.174
117	99.582	3.174
118	99.615	3.174
119	99.649	3.174
120	99.682	3.174
121	99.715	3.174
122	99.748	3.174
123	99.782	3.174

124	99.815	3.174
125	99.848	3.174
126	99.881	3.174
127	99.914	3.174
128	99.948	3.174
129	99.981	3.174
130	100.000	1.829

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.48
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.27

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 97.6935
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 215.3612

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 125.0 250.0 375.0 500.0
16.083	107.5696	233.87	QV
16.167	109.3850	263.59	VQ
16.250	111.3785	289.45	V Q
16.333	113.5520	315.60	.V Q
16.417	116.0688	365.44	.V Q.
16.500	118.8030	397.01	. V .Q
16.583	121.5822	403.54	. V . Q
16.667	124.2303	384.49	. V Q
16.750	126.7872	371.27	. V Q.
16.833	129.4002	379.41	. V Q
16.917	131.8087	349.72	. V Q
17.000	134.0215	321.29	. VQ
17.083	136.1342	306.76	. QV
17.167	138.1620	294.44	. Q V
17.250	140.1384	286.97	. Q V
17.333	142.0267	274.19	.Q V
17.417	143.8330	262.26	Q V
17.500	145.5653	251.53	Q V
17.583	147.2047	238.05	Q. V
17.667	148.7822	229.05	Q V
17.750	150.2877	218.60	Q V
17.833	151.7236	208.49	Q V
17.917	153.1062	200.75	Q V
18.000	154.4301	192.23	Q V
18.083	155.7163	186.76	Q V
18.167	156.9574	180.20	Q V.
18.250	158.1604	174.68	Q V.
18.333	159.3351	170.57	Q V.
18.417	160.4768	165.77	Q V.
18.500	161.5961	162.52	Q V
18.583	162.6848	158.08	Q V
18.667	163.7475	154.31	Q V
18.750	164.7903	151.41	Q V
18.833	165.8089	147.89	.Q V
18.917	166.8100	145.37	.Q V
19.000	167.7867	141.80	.Q .V
19.083	168.7428	138.83	.Q .V
19.167	169.6835	136.60	Q .V
19.250	170.6081	134.24	Q .V
19.333	171.5170	131.97	Q .V
19.417	172.4004	128.28	Q . V
19.500	173.2644	125.45	Q . V
19.583	174.1166	123.73	Q. . V
19.667	174.9581	122.18	Q. . V
19.750	175.7883	120.55	Q. . V
19.833	176.6056	118.68	Q. . V
19.917	177.4112	116.97	Q. . V
20.000	178.2067	115.52	Q. . V

****
FLOW PROCESS FROM NODE 2.07 TO NODE 2.09 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 20.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3930.00
DOWNSTREAM ELEVATION = 3750.00
CHANNEL LENGTH(FT) = 7700.00 MANNING'S FACTOR = .040
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 403.54
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 273.12
CHANNEL NORMAL VELOCITY FOR Q = 273.12 CFS = 6.83 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .801

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .592

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	115.4	109.0	109.0
14.167	119.1	110.3	110.3

14.250	123.8	111.8	111.8
14.333	129.2	113.9	113.9
14.417	136.5	117.0	117.0
14.500	145.0	121.0	121.0
14.583	153.9	125.8	125.8
14.667	161.9	132.1	132.1
14.750	169.4	139.7	139.7
14.833	177.3	148.0	148.0
14.917	184.0	156.2	156.2
15.000	189.7	164.0	164.0
15.083	194.9	171.8	171.8
15.167	199.8	179.0	179.0
15.250	204.6	185.3	185.3
15.333	209.2	191.0	191.0
15.417	212.3	196.1	196.1
15.500	213.7	201.1	201.1
15.583	213.9	205.9	205.9
15.667	213.4	209.7	209.7
15.750	210.5	212.0	212.0
15.833	206.5	213.2	213.2
15.917	204.1	213.3	213.3
16.000	206.5	211.7	211.7
16.083	233.9	208.6	208.6
16.167	263.6	206.0	206.0
16.250	289.5	206.3	206.3
16.333	315.6	222.5	222.5
16.417	365.4	246.7	246.7
16.500	397.0	271.8	271.8
16.583	403.5	297.6	297.6
16.667	384.5	337.5	337.5
16.750	371.3	372.6	372.6
16.833	379.4	390.9	390.9
16.917	349.7	387.2	387.2
17.000	321.3	377.8	377.8
17.083	306.8	378.7	378.7
17.167	294.4	361.7	361.7
17.250	287.0	337.9	337.9
17.333	274.2	319.6	319.6
17.417	262.3	304.8	304.8
17.500	251.5	294.3	294.3
17.583	238.0	282.5	282.5
17.667	229.1	270.6	270.6
17.750	218.6	259.4	259.4
17.833	208.5	246.8	246.8
17.917	200.8	236.4	236.4
18.000	192.2	225.9	225.9
18.083	186.8	215.6	215.6
18.167	180.2	206.9	206.9
18.250	174.7	198.3	198.3
18.333	170.6	191.5	191.5
18.417	165.8	184.8	184.8
18.500	162.5	178.9	178.9
18.583	158.1	174.0	174.0
18.667	154.3	169.1	169.1
18.750	151.4	165.2	165.2
18.833	147.9	161.0	161.0
18.917	145.4	157.1	157.1
19.000	141.8	153.7	153.7

```
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =     215.361 AF
    OUTFLOW VOLUME =     215.361 AF
    LOSS    VOLUME =        .000 AF
================================================================================

  END OF FLOOD ROUTING ANALYSIS
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            F L O O D   R O U T I N G   A N A L Y S I S
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                         Analysis prepared by:

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 ************************** DESCRIPTION OF STUDY **************************
*                          DESIGN NODE 1.18                                *
*          HYDROGRAPH AT NODE 2.09 ROUTED TO NODE 2.11                     *
*                                                                          *
 ***************************************************************************

  FILE NAME: H209-118.INP
  TIME/DATE OF STUDY: 16:10   6/25/1992

*****************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.09 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
=============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1529.300 ACRES
         BASEFLOW =    .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.143 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .600
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .332
         LOW LOSS FRACTION =  .369
         *HYDROGRAPH MODEL #2 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.582


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

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

-----------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
-----------------------------------------------------------------------------
       1                1.400               129.449
       2                4.909               324.529
       3               10.201               489.392
       4               18.566               773.497
       5               28.363               906.043
       6               37.289               825.350
       7               46.493               851.189
       8               53.777               673.570
       9               58.749               459.753
      10               62.631               359.012
      11               65.905               302.739
      12               68.599               249.151
      13               70.976               219.806
      14               73.120               198.305
      15               75.027               176.306
      16               76.803               164.259
      17               78.379               145.768
      18               79.841               135.183
      19               81.149               120.918
      20               82.352               111.296
      21               83.478               104.147
      22               84.466                91.302
      23               85.393                85.735
```

24	86.238	78.110
25	87.008	71.235
26	87.706	64.599
27	88.380	62.314
28	89.018	58.970
29	89.529	47.302
30	90.025	45.850
31	90.521	45.820
32	90.998	44.144
33	91.465	43.154
34	91.931	43.145
35	92.372	40.722
36	92.745	34.565
37	93.116	34.262
38	93.485	34.132
39	93.834	32.246
40	94.175	31.550
41	94.516	31.546
42	94.840	29.990
43	95.123	26.090
44	95.391	24.823
45	95.657	24.560
46	95.900	22.558
47	96.140	22.123
48	96.379	22.113
49	96.601	20.517
50	96.805	18.882
51	97.009	18.867
52	97.216	19.135
53	97.436	20.353
54	97.657	20.488
55	97.878	20.413
56	98.016	12.708
57	98.103	8.085
58	98.191	8.086
59	98.278	8.086
60	98.366	8.101
61	98.453	8.086
62	98.540	8.086
63	98.628	8.086
64	98.715	8.086
65	98.803	8.115
66	98.891	8.087
67	98.978	8.085
68	99.065	8.086
69	99.149	7.699
70	99.198	4.549
71	99.239	3.806
72	99.280	3.805
73	99.322	3.835
74	99.363	3.806
75	99.405	3.924
76	99.446	3.805
77	99.487	3.806
78	99.529	3.805
79	99.570	3.805
80	99.611	3.806
81	99.652	3.805
82	99.693	3.806
83	99.734	3.805
84	99.776	3.805
85	99.817	3.806
86	99.858	3.805
87	99.899	3.806
88	99.940	3.805
89	99.981	3.805
90	100.000	1.733

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.69
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.07

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 214.8043
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 391.2271

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      175.0     350.0     525.0     700.0
--------------------------------------------------------------------------
  16.083    183.5156    403.20  .         .       V .  Q      .         .
  16.167    186.2925    403.20  .         .        V.  Q      .         .
  16.250    189.4288    455.40  .         .        V.     Q   .         .
  16.333    192.5652    455.40  .         .        V.     Q   .         .
  16.417    196.0403    504.59  .         .         V       Q .         .
  16.500    199.5155    504.59  .         .         V       Q .         .
  16.583    203.5202    581.50  .         .         V         .  Q      .
  16.667    207.5250    581.50  .         .          V        .  Q      .
  16.750    211.7783    617.57  .         .         .V        .    Q    .
  16.833    216.0315    617.57  .         .         . V       .    Q    .
  16.917    220.2294    609.54  .         .         . V       .   Q     .
  17.000    224.4274    609.54  .         .         . V       .   Q     .
  17.083    228.6684    615.79  .         .         .  V      .    Q    .
  17.167    232.9093    615.79  .         .         .  V      .    Q    .
  17.250    236.7915    563.69  .         .         .   V     . Q       .
  17.333    240.6736    563.69  .         .         .   V     . Q       .
  17.417    244.1486    504.57  .         .         .   V   Q .         .
  17.500    247.6236    504.57  .         .         .    V  Q .         .
  17.583    250.8254    464.90  .         .         .    VQ   .         .
  17.667    254.0272    464.90  .         .         .    VQ   .         .
  17.750    256.9816    428.99  .         .         .   Q V   .         .
  17.833    259.9361    428.99  .         .         .   Q V   .         .
  17.917    262.6526    394.43  .         .         . Q   V   .         .
  18.000    265.3690    394.43  .         .         . Q    V  .         .
  18.083    267.8850    365.32  .         .         Q      V  .         .
  18.167    270.4010    365.32  .         .         Q      V  .         .
  18.250    272.7504    341.14  .         .        Q.      V  .         .
  18.333    275.0999    341.14  .         .        Q.       V .         .
  18.417    277.3158    321.76  .         .       Q .       V .         .
  18.500    279.5318    321.76  .         .       Q .       V .         .
  18.583    281.6473    307.17  .         .      Q  .       V .         .
  18.667    283.7628    307.17  .         .      Q  .        V.         .
  18.750    285.7777    292.56  .         .     Q   .        V.         .
  18.833    287.7927    292.56  .         .     Q   .        V.         .
  18.917    289.7292    281.18  .         .     Q   .        V.         .
  19.000    291.6656    281.18  .         .     Q   .        V.         .
  19.083    293.5240    269.83  .         .    Q    .         V         .
  19.167    295.3823    269.83  .         .    Q    .         V         .
  19.250    297.1739    260.14  .         .   Q     .         V         .
  19.333    298.9655    260.14  .         .   Q     .         V         .
  19.417    300.6947    251.09  .         .   Q     .         V         .
  19.500    302.4240    251.09  .         .   Q     .         V         .
  19.583    304.0860    241.32  .         .  Q      .         .V        .
  19.667    305.7479    241.32  .         .  Q      .         .V        .
  19.750    307.3570    233.63  .         .  Q      .         .V        .
  19.833    308.9660    233.63  .         .  Q      .         .V        .
  19.917    310.5193    225.55  .         . Q       .         .V        .
  20.000    312.0727    225.55  .         . Q       .         .V        .

******************************************************************************
  FLOW PROCESS FROM NODE     2.09 TO NODE     2.11 IS CODE =  52
--------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   25.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3750.00
          DOWNSTREAM ELEVATION =    3580.00
          CHANNEL LENGTH(FT) =    7100.00     MANNING'S FACTOR =  .038
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =   617.57
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   442.10
          CHANNEL NORMAL VELOCITY FOR Q =   442.10 CFS =   7.96 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .824

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .651


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                OUTFLOW LESS
         MODEL        INFLOW     ROUTED       LOSS
          TIME      (STREAM 1)   FLOW      (STREAM 1)
         (HRS)       (CFS)      (CFS)        (CFS)
         14.083        201.5      190.8        190.8
         14.167        201.5      192.9        192.9
```

14.250	213.2	196.3	196.3
14.333	213.2	199.7	199.7
14.417	228.4	205.1	205.1
14.500	228.4	210.4	210.4
14.583	249.4	217.6	217.6
14.667	249.4	224.6	224.6
14.750	273.4	234.6	234.6
14.833	273.4	244.3	244.3
14.917	296.1	256.2	256.2
15.000	296.1	267.4	267.4
15.083	319.8	279.4	279.4
15.167	319.8	290.3	290.3
15.250	340.7	302.5	302.5
15.333	340.7	313.8	313.8
15.417	354.5	325.2	325.2
15.500	354.5	335.3	335.3
15.583	361.9	343.7	343.7
15.667	361.9	350.7	350.7
15.750	366.1	355.8	355.8
15.833	366.1	359.8	359.8
15.917	368.8	362.6	362.6
16.000	368.8	364.9	364.9
16.083	403.2	366.6	366.6
16.167	403.2	368.1	368.1
16.250	455.4	380.8	380.8
16.333	455.4	395.4	395.4
16.417	504.6	419.1	419.1
16.500	504.6	442.7	442.7
16.583	581.5	468.6	468.6
16.667	581.5	492.0	492.0
16.750	617.6	527.7	527.7
16.833	617.6	562.7	562.7
16.917	609.5	587.8	587.8
17.000	609.5	607.2	607.2
17.083	615.8	611.1	611.1
17.167	615.8	610.1	610.1
17.250	563.7	612.0	612.0
17.333	563.7	614.5	614.5
17.417	504.6	596.7	596.7
17.500	504.6	575.2	575.2
17.583	464.9	546.6	546.6
17.667	464.9	519.2	519.2
17.750	429.0	495.5	495.5
17.833	429.0	475.6	475.6
17.917	394.4	455.8	455.8
18.000	394.4	438.4	438.4
18.083	365.3	419.9	419.9
18.167	365.3	403.3	403.3
18.250	341.1	387.1	387.1
18.333	341.1	372.9	372.9
18.417	321.8	359.3	359.3
18.500	321.8	347.5	347.5
18.583	307.2	336.4	336.4
18.667	307.2	326.9	326.9
18.750	292.6	318.3	318.3
18.833	292.6	311.1	311.1
18.917	281.2	303.3	303.3
19.000	281.2	296.3	296.3

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 391.227 AF
OUTFLOW VOLUME = 391.227 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*              HYDROGRAPH AT NODE 2.11 ROUTED TO NODE 2.13               *
*                                                                        *
 **************************************************************************

  FILE NAME: H211-118.INP
  TIME/DATE OF STUDY: 16:15   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.11 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4047.600 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.391 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .500
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .242
         LOW LOSS FRACTION =  .264
         *HYDROGRAPH MODEL #2 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  11.982


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

==========================================================================
                     UNIT HYDROGRAPH DETERMINATION
--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                1.087               266.027
       2                3.559               605.171
       3                7.104               867.511
       4               12.369              1288.580
       5               19.582              1765.551
       6               27.524              1943.750
       7               34.972              1822.846
       8               42.644              1877.765
       9               50.687              1968.699
      10               56.184              1345.405
      11               60.604              1081.636
      12               64.223               885.890
      13               67.318               757.422
      14               69.846               618.899
      15               72.087               548.419
      16               74.006               469.739
      17               75.808               440.833
      18               77.367               381.589
      19               78.814               354.260
      20               80.114               318.148
      21               81.298               289.907
      22               82.357               259.154
      23               83.348               242.387
```

24	84.270	225.757
25	85.136	211.950
26	85.938	196.199
27	86.665	177.954
28	87.359	169.859
29	88.000	156.958
30	88.586	143.393
31	89.101	126.104
32	89.607	123.777
33	90.092	118.799
34	90.552	112.556
35	90.918	89.684
36	91.276	87.415
37	91.632	87.357
38	91.988	86.896
39	92.326	82.931
40	92.662	82.106
41	92.997	82.102
42	93.330	81.449
43	93.609	68.340
44	93.871	63.993
45	94.132	64.001
46	94.393	63.924
47	94.642	60.860
48	94.882	58.695
49	95.122	58.703
50	95.362	58.705
51	95.587	55.161
52	95.793	50.509
53	96.000	50.509
54	96.206	50.494
55	96.392	45.413
56	96.560	41.247
57	96.728	41.004
58	96.896	41.118
59	97.059	40.033
60	97.205	35.724
61	97.349	35.124
62	97.492	35.206
63	97.637	35.363
64	97.791	37.598
65	97.946	38.118
66	98.102	38.078
67	98.256	37.638
68	98.344	21.596
69	98.404	14.683
70	98.464	14.681
71	98.524	14.602
72	98.584	14.763
73	98.643	14.601
74	98.703	14.602
75	98.763	14.761
76	98.823	14.683
77	98.883	14.522
78	98.943	14.763
79	99.003	14.681
80	99.063	14.602
81	99.123	14.681
82	99.183	14.683
83	99.243	14.683
84	99.298	13.486
85	99.329	7.738
86	99.358	6.943
87	99.386	6.862
88	99.414	6.862
89	99.442	6.943
90	99.470	6.861
91	99.499	7.021
92	99.531	7.901
93	99.560	7.021
94	99.589	7.021
95	99.617	7.021
96	99.646	7.021
97	99.675	7.021
98	99.703	7.021
99	99.732	7.021
100	99.761	7.021
101	99.789	7.021
102	99.818	7.021
103	99.847	7.021
104	99.875	7.021
105	99.904	7.021
106	99.933	7.021
107	99.962	7.021
108	99.990	7.021
109	100.000	2.396

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.21
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.55

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 406.9994
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1196.9010

118-2

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      450.0     900.0    1350.0    1800.0
--------------------------------------------------------------------------
  16.083    544.0392   1199.06  .         .       V .      Q   .         .
  16.167    552.2972   1199.06  .         .       V .      Q   .         .
  16.250    561.1917   1291.48  .         .       V .        Q .         .
  16.333    570.0862   1291.48  .         .        V.        Q .         .
  16.417    579.6083   1382.61  .         .        V.          Q         .
  16.500    589.1304   1382.61  .         .        V.          Q         .
  16.583    599.5634   1514.87  .         .         V          .  Q      .
  16.667    609.9964   1514.87  .         .         V          .  Q      .
  16.750    621.2801   1638.39  .         .         V          .     Q   .
  16.833    632.5638   1638.39  .         .          V         .     Q   .
  16.917    644.2388   1695.21  .         .         .V         .      Q  .
  17.000    655.9139   1695.21  .         .         .V         .      Q  .
  17.083    667.5490   1689.41  .         .         . V        .      Q  .
  17.167    679.1840   1689.41  .         .         . V        .      Q  .
  17.250    691.0061   1716.57  .         .         .  V       .       Q .
  17.333    702.8282   1716.57  .         .         .  V       .       Q .
  17.417    714.5509   1702.13  .         .         .  V       .      Q  .
  17.500    726.2736   1702.13  .         .         .   V      .      Q  .
  17.583    736.7131   1515.82  .         .         .   V      .  Q      .
  17.667    747.1526   1515.82  .         .         .   V      .  Q      .
  17.750    756.8958   1414.70  .         .         .    V     .Q        .
  17.833    766.6390   1414.70  .         .         .    V     .Q        .
  17.917    775.6785   1312.53  .         .         .    V   Q.          .
  18.000    784.7180   1312.53  .         .         .     V  Q.          .
  18.083    793.1448   1223.58  .         .         .     VQ  .          .
  18.167    801.5717   1223.58  .         .         .     VQ  .          .
  18.250    809.3674   1131.94  .         .         .    Q V  .          .
  18.333    817.1631   1131.94  .         .         .    Q V  .          .
  18.417    824.4202   1053.72  .         .         .  Q   V  .          .
  18.500    831.6772   1053.72  .         .         .  Q   V  .          .
  18.583    838.4873    988.83  .         .         .Q      V .          .
  18.667    845.2974    988.83  .         .         .Q      V .          .
  18.750    851.7863    942.18  .         .         Q       V .          .
  18.833    858.2751    942.18  .         .         Q       V .          .
  18.917    864.4333    894.17  .         .        Q.       V .          .
  19.000    870.5915    894.17  .         .        Q.        V.          .
  19.083    876.4958    857.31  .         .        Q.        V.          .
  19.167    882.4001    857.31  .         .        Q.        V.          .
  19.250    888.0610    821.97  .         .       Q .        V.          .
  19.333    893.7220    821.97  .         .       Q .        V.          .
  19.417    899.1711    791.21  .         .      Q  .         V          .
  19.500    904.6202    791.21  .         .      Q  .         V          .
  19.583    909.8659    761.68  .         .     Q   .         V          .
  19.667    915.1116    761.68  .         .     Q   .         V          .
  19.750    920.1824    736.28  .         .     Q   .         V          .
  19.833    925.2532    736.28  .         .     Q   .         V          .
  19.917    930.1588    712.28  .         .    Q    .         .V         .
  20.000    935.0643    712.28  .         .    Q    .         .V         .

**************************************************************************
  FLOW PROCESS FROM NODE     2.11 TO NODE     2.13 IS CODE =  52
--------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   30.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3580.00
          DOWNSTREAM ELEVATION =    3400.00
          CHANNEL LENGTH(FT) =    9800.00     MANNING'S FACTOR =  .035
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1716.57
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1268.43
          CHANNEL NORMAL VELOCITY FOR Q =  1268.43 CFS =  10.45 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .860

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .681


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                              OUTFLOW LESS
         MODEL        INFLOW      ROUTED       LOSS
          TIME      (STREAM 1)    FLOW      (STREAM 1)
         (HRS)       (CFS)       (CFS)        (CFS)
         14.083        600.9       570.6        570.6
         14.167        600.9       577.9        577.9
```

14.250	629.5	584.4	584.4
14.333	629.5	595.7	595.7
14.417	665.2	605.3	605.3
14.500	665.2	621.8	621.8
14.583	711.5	634.6	634.6
14.667	711.5	655.4	655.4
14.750	769.7	671.9	671.9
14.833	769.7	698.9	698.9
14.917	833.1	719.9	719.9
15.000	833.1	753.8	753.8
15.083	895.3	778.2	778.2
15.167	895.3	815.6	815.6
15.250	960.4	840.8	840.8
15.333	960.4	877.9	877.9
15.417	1020.1	903.6	903.6
15.500	1020.1	942.3	942.3
15.583	1057.5	967.3	967.3
15.667	1057.5	1003.3	1003.3
15.750	1086.5	1022.7	1022.7
15.833	1086.5	1046.4	1046.4
15.917	1115.3	1060.2	1060.2
16.000	1115.3	1078.1	1078.1
16.083	1199.1	1090.0	1090.0
16.167	1199.1	1107.2	1107.2
16.250	1291.5	1130.6	1130.6
16.333	1291.5	1177.2	1177.2
16.417	1382.6	1211.8	1211.8
16.500	1382.6	1266.1	1266.1
16.583	1514.9	1302.8	1302.8
16.667	1514.9	1357.2	1357.2
16.750	1638.4	1402.6	1402.6
16.833	1638.4	1479.1	1479.1
16.917	1695.2	1529.7	1529.7
17.000	1695.2	1603.8	1603.8
17.083	1689.4	1639.4	1639.4
17.167	1689.4	1677.4	1677.4
17.250	1716.6	1688.3	1688.3
17.333	1716.6	1689.1	1689.1
17.417	1702.1	1695.1	1695.1
17.500	1702.1	1709.7	1709.7
17.583	1515.8	1711.3	1711.3
17.667	1515.8	1705.1	1705.1
17.750	1414.7	1663.4	1663.4
17.833	1414.7	1562.9	1562.9
17.917	1312.5	1509.3	1509.3
18.000	1312.5	1444.9	1444.9
18.083	1223.6	1402.6	1402.6
18.167	1223.6	1341.2	1341.2
18.250	1131.9	1302.8	1302.8
18.333	1131.9	1248.8	1248.8
18.417	1053.7	1212.1	1212.1
18.500	1053.7	1157.5	1157.5
18.583	988.8	1123.4	1123.4
18.667	988.8	1075.9	1075.9
18.750	942.2	1047.0	1047.0
18.833	942.2	1007.4	1007.4
18.917	894.2	984.8	984.8
19.000	894.2	955.8	955.8

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1196.901 AF
OUTFLOW VOLUME = 1196.901 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

          F L O O D   R O U T I N G   A N A L Y S I S
    USING ORANGE/SAN BERNARDINO COUNTY UNIT-HYDROGRAPH (1986 MANUAL)
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                        Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*          HYDROGRAPH AT NODE 2.13 ROUTED TO NODE 2.15                   *
*                                                                        *
 ************************************************************************

  FILE NAME: H213-118.INP
  TIME/DATE OF STUDY: 16:20   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.13 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    4510.000 ACRES
         BASEFLOW =    .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.651 HOURS
         VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .500
         VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .248
         LOW LOSS FRACTION =  .274
         *HYDROGRAPH MODEL #3 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.142


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                1.374               249.749
       2                4.868               635.288
       3               10.359               998.290
       4               19.015              1573.737
       5               28.945              1805.370
       6               38.288              1698.614
       7               48.570              1869.512
       8               56.049              1359.754
       9               61.520               994.669
      10               65.848               786.855
      11               69.289               625.576
      12               72.145               519.213
      13               74.552               437.584
      14               76.706               391.691
      15               78.563               337.626
      16               80.219               301.044
      17               81.686               266.658
      18               82.967               233.039
      19               84.164               217.526
      20               85.257               198.783
      21               86.234               177.558
      22               87.137               164.190
      23               87.958               149.347
```

24	88.689	132.859
25	89.337	117.813
26	89.960	113.156
27	90.544	106.252
28	91.009	84.555
29	91.460	82.049
30	91.911	81.837
31	92.342	78.361
32	92.766	77.092
33	93.190	77.081
34	93.567	68.638
35	93.901	60.630
36	94.234	60.581
37	94.561	59.498
38	94.869	55.911
39	95.175	55.667
40	95.478	55.109
41	95.750	49.462
42	96.009	47.092
43	96.248	43.463
44	96.472	40.668
45	96.684	38.547
46	96.896	38.549
47	97.099	36.883
48	97.281	33.200
49	97.463	33.038
50	97.646	33.319
51	97.841	35.429
52	98.038	35.757
53	98.233	35.569
54	98.351	21.317
55	98.426	13.788
56	98.502	13.743
57	98.578	13.741
58	98.653	13.791
59	98.729	13.788
60	98.805	13.696
61	98.881	13.835
62	98.956	13.743
63	99.032	13.741
64	99.108	13.789
65	99.184	13.789
66	99.259	13.696
67	99.316	10.459
68	99.352	6.519
69	99.388	6.425
70	99.423	6.472
71	99.459	6.519
72	99.495	6.472
73	99.535	7.363
74	99.571	6.472
75	99.606	6.472
76	99.642	6.472
77	99.678	6.472
78	99.713	6.472
79	99.749	6.472
80	99.784	6.472
81	99.820	6.472
82	99.856	6.472
83	99.891	6.472
84	99.927	6.472
85	99.962	6.472
86	99.998	6.472
87	100.000	.375

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.26
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.49

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 474.9828
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1312.1600

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      450.0     900.0    1350.0    1800.0
--------------------------------------------------------------------------
  16.083    568.5314   1251.67  .         .      V  .       Q  .         .
  16.167    577.1517   1251.67  .         .      V  .       Q  .         .
  16.250    585.7720   1251.67  .         .      V  .       Q  .         .
  16.333    595.2283   1373.06  .         .       V .          Q         .
  16.417    604.6847   1373.06  .         .       V .          Q         .
  16.500    614.1411   1373.06  .         .       V .          Q         .
  16.583    624.5038   1504.68  .         .        V.          .  Q      .
  16.667    634.8666   1504.68  .         .        V.          .  Q      .
  16.750    645.2294   1504.68  .         .        V.          .  Q      .
  16.833    656.6682   1660.91  .         .         V          .     Q   .
  16.917    668.1070   1660.91  .         .         V          .     Q   .
  17.000    679.5458   1660.91  .         .         V          .     Q   .
  17.083    691.4065   1722.17  .         .         .V         .       Q .
  17.167    703.2672   1722.17  .         .         .V         .       Q .
  17.250    715.1279   1722.17  .         .         .V         .       Q .
  17.333    726.9415   1715.33  .         .         . V        .       Q .
  17.417    738.7551   1715.33  .         .         . V        .       Q .
  17.500    750.5687   1715.33  .         .         . V        .       Q .
  17.583    762.3923   1716.79  .         .         .  V       .       Q .
  17.667    774.2159   1716.79  .         .         .  V       .       Q .
  17.750    786.0396   1716.79  .         .         .  V       .       Q .
  17.833    796.6364   1538.66  .         .         .   V      .   Q     .
  17.917    807.2333   1538.66  .         .         .   V      .   Q     .
  18.000    817.8301   1538.66  .         .         .   V      .   Q     .
  18.083    827.3672   1384.78  .         .         .    V     Q         .
  18.167    836.9042   1384.78  .         .         .    V     Q         .
  18.250    846.4413   1384.78  .         .         .    V     Q         .
  18.333    855.1248   1260.84  .         .         .     V Q .         .
  18.417    863.8082   1260.84  .         .         .     V Q .         .
  18.500    872.4917   1260.84  .         .         .     V Q .         .
  18.583    880.3372   1139.16  .         .         .    QV   .         .
  18.667    888.1826   1139.16  .         .         .    Q V  .         .
  18.750    896.0281   1139.16  .         .         .    Q V  .         .
  18.833    903.2429   1047.60  .         .         .  Q   V  .         .
  18.917    910.4578   1047.60  .         .         .  Q   V  .         .
  19.000    917.6726   1047.60  .         .         .  Q   V  .         .
  19.083    924.3937    975.90  .         .         .Q      V .         .
  19.167    931.1149    975.90  .         .         .Q      V .         .
  19.250    937.8360    975.90  .         .         .Q      V .         .
  19.333    944.1691    919.57  .         .         Q       V .         .
  19.417    950.5023    919.57  .         .         Q       V .         .
  19.500    956.8354    919.57  .         .         Q        V.         .
  19.583    962.8239    869.53  .         .        Q.        V.         .
  19.667    968.8124    869.53  .         .        Q.        V.         .
  19.750    974.8010    869.53  .         .        Q.        V.         .
  19.833    980.4948    826.75  .         .       Q .        V.         .
  19.917    986.1887    826.75  .         .       Q .         V         .
  20.000    991.8825    826.75  .         .       Q .         V         .

**************************************************************************
 FLOW PROCESS FROM NODE     2.13 TO NODE     2.15 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   30.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3400.00
          DOWNSTREAM ELEVATION =    3300.00
          CHANNEL LENGTH(FT) =    5800.00     MANNING'S FACTOR =  .035
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1722.17
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1275.43
          CHANNEL NORMAL VELOCITY FOR Q =  1275.43 CFS =  10.26 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .858

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .767


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
         MODEL        INFLOW     ROUTED      LOSS
          TIME      (STREAM 1)    FLOW     (STREAM 1)
         (HRS)       (CFS)       (CFS)       (CFS)
         14.083        642.8       613.8       613.8
         14.167        642.8       622.7       622.7
```

14.250	642.8	638.1	638.1
14.333	686.8	641.7	641.7
14.417	686.8	655.5	655.5
14.500	686.8	679.5	679.5
14.583	745.9	685.1	685.1
14.667	745.9	703.8	703.8
14.750	745.9	736.1	736.1
14.833	827.1	743.6	743.6
14.917	827.1	769.3	769.3
15.000	827.1	813.6	813.6
15.083	919.2	823.9	823.9
15.167	919.2	853.4	853.4
15.250	919.2	903.8	903.8
15.333	1003.0	915.6	915.6
15.417	1003.0	943.0	943.0
15.500	1003.0	989.0	989.0
15.583	1082.1	999.8	999.8
15.667	1082.1	1025.5	1025.5
15.750	1082.1	1068.9	1068.9
15.833	1148.3	1079.0	1079.0
15.917	1148.3	1100.8	1100.8
16.000	1148.3	1137.2	1137.2
16.083	1251.7	1145.7	1145.7
16.167	1251.7	1178.1	1178.1
16.250	1251.7	1234.5	1234.5
16.333	1373.1	1247.7	1247.7
16.417	1373.1	1286.4	1286.4
16.500	1373.1	1352.8	1352.8
16.583	1504.7	1368.3	1368.3
16.667	1504.7	1410.6	1410.6
16.750	1504.7	1482.7	1482.7
16.833	1660.9	1499.6	1499.6
16.917	1660.9	1549.4	1549.4
17.000	1660.9	1634.9	1634.9
17.083	1722.2	1654.8	1654.8
17.167	1722.2	1677.5	1677.5
17.250	1722.2	1711.7	1711.7
17.333	1715.3	1719.7	1719.7
17.417	1715.3	1719.6	1719.6
17.500	1715.3	1716.3	1716.3
17.583	1716.8	1715.6	1715.6
17.667	1716.8	1715.8	1715.8
17.750	1716.8	1716.6	1716.6
17.833	1538.7	1716.7	1716.7
17.917	1538.7	1664.4	1664.4
18.000	1538.7	1568.0	1568.0
18.083	1384.8	1545.5	1545.5
18.167	1384.8	1495.0	1495.0
18.250	1384.8	1410.5	1410.5
18.333	1260.8	1390.8	1390.8
18.417	1260.8	1349.8	1349.8
18.500	1260.8	1281.6	1281.6
18.583	1139.2	1265.7	1265.7
18.667	1139.2	1226.2	1226.2
18.750	1139.2	1159.5	1159.5
18.833	1047.6	1143.9	1143.9
18.917	1047.6	1113.4	1113.4
19.000	1047.6	1062.9	1062.9

```
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =    1312.160 AF
    OUTFLOW VOLUME =    1312.159 AF
    LOSS    VOLUME =        .000 AF
================================================================================

  END OF FLOOD ROUTING ANALYSIS
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 ************************* DESCRIPTION OF STUDY *************************
*                         DESIGN NODE 1.18                               *
*            HYDROGRAPH AT NODE 2.15 ROUTED TO NODE 2.17                 *
*                                                                        *
 **************************************************************************

  FILE NAME: H215-118.INP
  TIME/DATE OF STUDY: 16:28   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.15 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    5333.000 ACRES
         BASEFLOW =    .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.808 HOURS
         VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
         VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .252
         LOW LOSS FRACTION =  .281
         *HYDROGRAPH MODEL #3 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  13.827


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
          1                1.202              258.343
          2                4.100              623.201
          3                8.524              951.037
          4               15.515             1502.928
          5               24.228             1873.192
          6               33.015             1889.142
          7               42.227             1980.493
          8               51.767             2050.974
          9               58.299             1404.270
         10               63.412             1099.055
         11               67.544              888.483
         12               70.837              707.962
         13               73.566              586.571
         14               75.848              490.555
         15               77.910              443.367
         16               79.646              373.154
         17               81.227              339.942
         18               82.588              292.651
         19               83.797              259.802
         20               84.892              235.424
         21               85.900              216.753
         22               86.844              203.028
         23               87.680              179.783
```

24	88.469	169.513
25	89.191	155.240
26	89.843	140.070
27	90.399	119.582
28	90.936	115.558
29	91.453	111.143
30	91.890	93.917
31	92.266	80.859
32	92.642	80.863
33	93.016	80.300
34	93.372	76.572
35	93.725	75.816
36	94.077	75.788
37	94.400	69.501
38	94.679	59.784
39	94.955	59.494
40	95.231	59.363
41	95.491	55.800
42	95.743	54.168
43	95.995	54.139
44	96.240	52.756
45	96.459	47.023
46	96.655	42.213
47	96.847	41.317
48	97.027	38.704
49	97.195	35.967
50	97.362	35.962
51	97.528	35.668
52	97.677	32.094
53	97.822	31.192
54	97.967	31.192
55	98.116	31.896
56	98.271	33.478
57	98.428	33.572
58	98.583	33.452
59	98.676	19.863
60	98.731	11.903
61	98.786	11.905
62	98.841	11.855
63	98.897	11.952
64	98.952	11.855
65	99.007	11.854
66	99.063	11.954
67	99.118	11.855
68	99.173	11.903
69	99.229	11.903
70	99.284	11.855
71	99.339	11.905
72	99.395	11.903
73	99.443	10.397
74	99.471	5.928
75	99.497	5.636
76	99.523	5.539
77	99.549	5.588
78	99.575	5.587
79	99.601	5.734
80	99.627	5.587
81	99.653	5.588
82	99.679	5.587
83	99.705	5.588
84	99.731	5.587
85	99.757	5.587
86	99.783	5.588
87	99.809	5.587
88	99.835	5.588
89	99.861	5.587
90	99.887	5.587
91	99.913	5.588
92	99.939	5.587
93	99.965	5.588
94	99.991	5.587
95	100.000	1.906

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.30
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.46

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 575.7486
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1537.5240

```
==========================================================================
                    2 4 - H O U R   S T O R M
                  R U N O F F   H Y D R O G R A P H
==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      500.0    1000.0    1500.0    2000.0
--------------------------------------------------------------------------
  16.083    652.1075   1427.92  .         .     V   .       Q .         .
  16.167    661.9417   1427.92  .         .      V  .       Q .         .
  16.250    671.7759   1427.92  .         .      V  .       Q .         .
  16.333    682.5018   1557.40  .         .      V  .         .Q        .
  16.417    693.2277   1557.40  .         .       V .         .Q        .
  16.500    703.9536   1557.40  .         .       V .         .Q        .
  16.583    715.5817   1688.41  .         .       V .         .  Q      .
  16.667    727.2099   1688.41  .         .       V .         .  Q      .
  16.750    738.8381   1688.41  .         .        V.         .  Q      .
  16.833    751.6257   1856.76  .         .        V.         .      Q  .
  16.917    764.4133   1856.76  .         .        V.         .      Q  .
  17.000    777.2009   1856.76  .         .         V         .      Q  .
  17.083    790.6134   1947.50  .         .         V         .       Q .
  17.167    804.0259   1947.50  .         .         V         .       Q .
  17.250    817.4385   1947.50  .         .          V        .       Q .
  17.333    830.9506   1961.96  .         .         .V        .        Q.
  17.417    844.4626   1961.96  .         .         .V        .        Q.
  17.500    857.9747   1961.96  .         .         . V       .        Q.
  17.583    871.6343   1983.38  .         .         . V       .        Q.
  17.667    885.2939   1983.38  .         .         .  V      .        Q.
  17.750    898.9536   1983.38  .         .         .  V      .        Q.
  17.833    912.2689   1933.39  .         .         .  V      .       Q .
  17.917    925.5842   1933.39  .         .         .   V     .       Q .
  18.000    938.8995   1933.39  .         .         .   V     .       Q .
  18.083    950.7126   1715.27  .         .         .   V     .   Q     .
  18.167    962.5257   1715.27  .         .         .    V    .   Q     .
  18.250    974.3388   1715.27  .         .         .    V    .   Q     .
  18.333    985.1452   1569.09  .         .         .    V    .Q        .
  18.417    995.9516   1569.09  .         .         .    V    .Q        .
  18.500   1006.7580   1569.09  .         .         .     V   .Q        .
  18.583   1016.6130   1430.96  .         .         .     V Q .         .
  18.667   1026.4680   1430.96  .         .         .     V Q .         .
  18.750   1036.3230   1430.96  .         .         .     V Q .         .
  18.833   1045.2490   1296.06  .         .         .    Q V  .         .
  18.917   1054.1750   1296.06  .         .         .    Q V  .         .
  19.000   1063.1010   1296.06  .         .         .    Q V  .         .
  19.083   1071.3420   1196.47  .         .         .  Q   V  .         .
  19.167   1079.5820   1196.47  .         .         .  Q    V .         .
  19.250   1087.8220   1196.47  .         .         .  Q    V .         .
  19.333   1095.5020   1115.11  .         .         . Q     V .         .
  19.417   1103.1810   1115.11  .         .         . Q     V .         .
  19.500   1110.8610   1115.11  .         .         . Q     V .         .
  19.583   1118.1060   1051.96  .         .         .Q       V.         .
  19.667   1125.3510   1051.96  .         .         .Q       V.         .
  19.750   1132.5960   1051.96  .         .         .Q       V.         .
  19.833   1139.4360    993.25  .         .        Q.        V.         .
  19.917   1146.2770    993.25  .         .        Q.        V.         .
  20.000   1153.1180    993.25  .         .        Q.        V.         .

******************************************************************************
  FLOW PROCESS FROM NODE     2.15 TO NODE     2.17 IS CODE =  52
--------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   30.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3300.00
          DOWNSTREAM ELEVATION =    3175.00
          CHANNEL LENGTH(FT) =    8000.00     MANNING'S FACTOR =  .030
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1983.38
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1468.86
          CHANNEL NORMAL VELOCITY FOR Q =  1468.86 CFS =  11.54 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .872

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .744


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                OUTFLOW LESS
         MODEL        INFLOW      ROUTED        LOSS
          TIME      (STREAM 1)    FLOW      (STREAM 1)
         (HRS)       (CFS)       (CFS)        (CFS)
         14.083        740.8       709.2        709.2
         14.167        740.8       710.1        710.1
```

14.250	740.8	732.6	732.6
14.333	786.7	738.7	738.7
14.417	786.7	740.3	740.3
14.500	786.7	774.3	774.3
14.583	846.5	783.5	783.5
14.667	846.5	785.9	785.9
14.750	846.5	830.3	830.3
14.833	927.9	842.4	842.4
14.917	927.9	845.4	845.4
15.000	927.9	905.9	905.9
15.083	1025.3	922.3	922.3
15.167	1025.3	926.5	926.5
15.250	1025.3	999.0	999.0
15.333	1118.9	1018.6	1018.6
15.417	1118.9	1023.6	1023.6
15.500	1118.9	1093.5	1093.5
15.583	1206.1	1112.4	1112.4
15.667	1206.1	1117.2	1117.2
15.750	1206.1	1182.4	1182.4
15.833	1302.1	1200.1	1200.1
15.917	1302.1	1204.6	1204.6
16.000	1302.1	1276.1	1276.1
16.083	1427.9	1295.4	1295.4
16.167	1427.9	1300.4	1300.4
16.250	1427.9	1393.9	1393.9
16.333	1557.4	1419.2	1419.2
16.417	1557.4	1425.7	1425.7
16.500	1557.4	1522.3	1522.3
16.583	1688.4	1548.4	1548.4
16.667	1688.4	1555.1	1555.1
16.750	1688.4	1652.9	1652.9
16.833	1856.8	1679.3	1679.3
16.917	1856.8	1686.1	1686.1
17.000	1856.8	1811.3	1811.3
17.083	1947.5	1845.1	1845.1
17.167	1947.5	1853.8	1853.8
17.250	1947.5	1922.6	1922.6
17.333	1962.0	1941.1	1941.1
17.417	1962.0	1945.9	1945.9
17.500	1962.0	1957.7	1957.7
17.583	1983.4	1960.9	1960.9
17.667	1983.4	1961.7	1961.7
17.750	1983.4	1977.6	1977.6
17.833	1933.4	1981.9	1981.9
17.917	1933.4	1983.0	1983.0
18.000	1933.4	1946.6	1946.6
18.083	1715.3	1936.8	1936.8
18.167	1715.3	1934.3	1934.3
18.250	1715.3	1773.6	1773.6
18.333	1569.1	1730.2	1730.2
18.417	1569.1	1719.1	1719.1
18.500	1569.1	1609.0	1609.0
18.583	1431.0	1579.3	1579.3
18.667	1431.0	1571.7	1571.7
18.750	1431.0	1468.4	1468.4
18.833	1296.1	1440.6	1440.6
18.917	1296.1	1433.4	1433.4
19.000	1296.1	1332.6	1332.6

==========

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1537.524 AF
OUTFLOW VOLUME = 1537.524 AF
LOSS VOLUME = .000 AF

==========

END OF FLOOD ROUTING ANALYSIS

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

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*              HYDROGRAPH AT NODE 2.17 ROUTED TO NODE 1.17               *
*                                                                        *
 **************************************************************************

  FILE NAME: H217-118.INP
  TIME/DATE OF STUDY: 16:42   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     2.17 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    5852.000 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    2.000 HOURS
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .400
        VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .200
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .246
        LOW LOSS FRACTION =  .272
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  12.500


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 20.00


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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
          1               1.068              251.917
          2               3.526              579.993
          3               7.132              850.621
          4              12.742             1323.386
          5              20.204             1760.403
          6              28.291             1907.837
          7              36.136             1850.672
          8              45.064             2106.226
          9              53.209             1921.491
         10              59.087             1386.563
         11              63.842             1121.880
         12              67.757              923.526
         13              70.953              753.858
         14              73.591              622.311
         15              75.808              523.057
         16              77.785              466.456
         17              79.504              405.483
         18              80.995              351.772
         19              82.353              320.381
         20              83.518              274.749
         21              84.550              243.427
         22              85.497              223.376
         23              86.383              209.223
```

24	87.210	195.067
25	87.972	179.734
26	88.669	164.397
27	89.326	154.963
28	89.935	143.683
29	90.455	122.674
30	90.925	110.877
31	91.380	107.337
32	91.820	103.800
33	92.200	89.646
34	92.520	75.489
35	92.840	75.491
36	93.160	75.493
37	93.470	73.131
38	93.770	70.772
39	94.070	70.773
40	94.370	70.772
41	94.635	62.517
42	94.870	55.439
43	95.105	55.439
44	95.340	55.439
45	95.565	53.077
46	95.780	50.721
47	95.995	50.720
48	96.210	50.721
49	96.410	47.181
50	96.595	43.643
51	96.772	41.875
52	96.937	38.923
53	97.092	36.567
54	97.237	34.206
55	97.382	34.208
56	97.527	34.206
57	97.662	31.848
58	97.787	29.489
59	97.912	29.489
60	98.037	29.489
61	98.167	30.667
62	98.302	31.848
63	98.438	31.848
64	98.572	31.846
65	98.665	21.823
66	98.715	11.794
67	98.765	11.796
68	98.815	11.796
69	98.865	11.794
70	98.915	11.796
71	98.965	11.794
72	99.015	11.796
73	99.065	11.796
74	99.115	11.794
75	99.165	11.796
76	99.215	11.794
77	99.265	11.796
78	99.315	11.796
79	99.365	11.794
80	99.415	11.796
81	99.452	8.670
82	99.475	5.544
83	99.499	5.603
84	99.522	5.484
85	99.546	5.544
86	99.570	5.605
87	99.593	5.544
88	99.619	6.134
89	99.643	5.544
90	99.666	5.544
91	99.689	5.544
92	99.713	5.544
93	99.736	5.544
94	99.760	5.544
95	99.783	5.544
96	99.807	5.544
97	99.830	5.544
98	99.854	5.544
99	99.877	5.544
100	99.901	5.544
101	99.924	5.544
102	99.948	5.544
103	99.971	5.544
104	99.995	5.544
105	100.000	1.184

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.25
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.50

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 611.7972
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1707.1250

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      550.0    1100.0    1650.0    2200.0
--------------------------------------------------------------------------
  16.083    702.4745   1518.11  .         .     V   .       Q  .         .
  16.167    712.9299   1518.11  .         .     V   .       Q  .         .
  16.250    723.3852   1518.11  .         .     V   .       Q  .         .
  16.333    734.7684   1652.85  .         .      V  .          Q         .
  16.417    746.1517   1652.85  .         .      V  .          Q         .
  16.500    757.5349   1652.85  .         .      V  .          Q         .
  16.583    769.7701   1776.55  .         .       V .          . Q       .
  16.667    782.0052   1776.55  .         .       V .          . Q       .
  16.750    794.2404   1776.55  .         .       V .          . Q       .
  16.833    807.6342   1944.77  .         .       V .          .    Q    .
  16.917    821.0279   1944.77  .         .        V.          .    Q    .
  17.000    834.4216   1944.77  .         .        V.          .    Q    .
  17.083    848.6576   2067.06  .         .        V.          .      Q  .
  17.167    862.8936   2067.06  .         .         V          .      Q  .
  17.250    877.1295   2067.06  .         .         V          .      Q  .
  17.333    891.5726   2097.14  .         .         V          .       Q .
  17.417    906.0157   2097.14  .         .          V         .       Q .
  17.500    920.4589   2097.14  .         .          V         .       Q .
  17.583    934.8911   2095.56  .         .         .V         .       Q .
  17.667    949.3234   2095.56  .         .         . V        .       Q .
  17.750    963.7556   2095.56  .         .         . V        .       Q .
  17.833    978.3782   2123.20  .         .         . V        .       Q .
  17.917    993.0009   2123.20  .         .         .  V       .       Q .
  18.000   1007.6230   2123.20  .         .         .  V       .       Q .
  18.083   1021.4420   2006.49  .         .         .  V       .     Q   .
  18.167   1035.2610   2006.49  .         .         .   V      .     Q   .
  18.250   1049.0800   2006.49  .         .         .   V      .     Q   .
  18.333   1061.5480   1810.46  .         .         .   V      . Q       .
  18.417   1074.0170   1810.46  .         .         .    V     . Q       .
  18.500   1086.4860   1810.46  .         .         .    V     . Q       .
  18.583   1097.9930   1670.83  .         .         .    V     Q         .
  18.667   1109.5000   1670.83  .         .         .    V     Q         .
  18.750   1121.0070   1670.83  .         .         .     V    Q         .
  18.833   1131.5430   1529.80  .         .         .     VQ   .         .
  18.917   1142.0790   1529.80  .         .         .     VQ   .         .
  19.000   1152.6150   1529.80  .         .         .      Q   .         .
  19.083   1162.2530   1399.48  .         .         .    Q V   .         .
  19.167   1171.8910   1399.48  .         .         .    Q V   .         .
  19.250   1181.5290   1399.48  .         .         .    Q V   .         .
  19.333   1190.4540   1295.92  .         .         .  Q   V   .         .
  19.417   1199.3800   1295.92  .         .         .  Q    V  .         .
  19.500   1208.3050   1295.92  .         .         .  Q    V  .         .
  19.583   1216.6450   1210.96  .         .         . Q     V  .         .
  19.667   1224.9840   1210.96  .         .         . Q     V  .         .
  19.750   1233.3240   1210.96  .         .         . Q     V  .         .
  19.833   1241.2000   1143.55  .         .         Q        V.         .
  19.917   1249.0760   1143.55  .         .         Q        V.         .
  20.000   1256.9510   1143.55  .         .         Q        V.         .

******************************************************************************
  FLOW PROCESS FROM NODE     2.17 TO NODE     1.17 IS CODE =  52
--------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   35.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3175.00
          DOWNSTREAM ELEVATION =    3070.00
          CHANNEL LENGTH(FT) =    7500.00     MANNING'S FACTOR =  .030
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  2123.20
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1586.52
          CHANNEL NORMAL VELOCITY FOR Q =  1586.52 CFS =  11.07 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .867

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .743


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                OUTFLOW LESS
         MODEL        INFLOW      ROUTED        LOSS
          TIME      (STREAM 1)    FLOW      (STREAM 1)
         (HRS)       (CFS)       (CFS)        (CFS)
         14.083        804.2       773.1        773.1
         14.167        804.2       774.9        774.9
```

14.250	804.2	796.7	796.7
14.333	849.3	802.3	802.3
14.417	849.3	805.1	805.1
14.500	849.3	837.9	837.9
14.583	907.1	846.4	846.4
14.667	907.1	850.3	850.3
14.750	907.1	892.5	892.5
14.833	984.4	903.3	903.3
14.917	984.4	908.5	908.5
15.000	984.4	964.9	964.9
15.083	1080.5	979.4	979.4
15.167	1080.5	986.1	986.1
15.250	1080.5	1056.2	1056.2
15.333	1177.5	1074.3	1074.3
15.417	1177.5	1081.9	1081.9
15.500	1177.5	1152.9	1152.9
15.583	1264.8	1171.2	1171.2
15.667	1264.8	1178.6	1178.6
15.750	1264.8	1242.6	1242.6
15.833	1369.0	1259.1	1259.1
15.917	1369.0	1266.6	1266.6
16.000	1369.0	1342.7	1342.7
16.083	1518.1	1362.2	1362.2
16.167	1518.1	1371.9	1371.9
16.250	1518.1	1480.5	1480.5
16.333	1652.8	1508.5	1508.5
16.417	1652.8	1519.8	1519.8
16.500	1652.8	1618.6	1618.6
16.583	1776.5	1644.1	1644.1
16.667	1776.5	1654.4	1654.4
16.750	1776.5	1745.1	1745.1
16.833	1944.8	1768.5	1768.5
16.917	1944.8	1779.7	1779.7
17.000	1944.8	1902.3	1902.3
17.083	2067.1	1933.9	1933.9
17.167	2067.1	1945.8	1945.8
17.250	2067.1	2035.9	2035.9
17.333	2097.1	2059.0	2059.0
17.417	2097.1	2065.9	2065.9
17.500	2097.1	2089.1	2089.1
17.583	2095.6	2095.1	2095.1
17.667	2095.6	2096.6	2096.6
17.750	2095.6	2095.8	2095.8
17.833	2123.2	2095.6	2095.6
17.917	2123.2	2096.4	2096.4
18.000	2123.2	2116.3	2116.3
18.083	2006.5	2121.4	2121.4
18.167	2006.5	2119.1	2119.1
18.250	2006.5	2035.4	2035.4
18.333	1810.5	2013.9	2013.9
18.417	1810.5	2002.3	2002.3
18.500	1810.5	1859.8	1859.8
18.583	1670.8	1823.1	1823.1
18.667	1670.8	1809.4	1809.4
18.750	1670.8	1706.5	1706.5
18.833	1529.8	1680.0	1680.0
18.917	1529.8	1668.8	1668.8
19.000	1529.8	1565.5	1565.5

==========

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1707.128 AF
OUTFLOW VOLUME = 1707.126 AF
LOSS VOLUME = .000 AF

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END OF FLOOD ROUTING ANALYSIS

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

          F L O O D   R O U T I N G   A N A L Y S I S
    USING ORANGE/SAN BERNARDINO COUNTY UNIT-HYDROGRAPH (1986 MANUAL)
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           Ver. 1.9A  Release Date: 3/07/92  License ID 1263

                       Analysis prepared by:

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       23332 MILL CREEK DRIVE, SUITE 100, LAGUNA HILLS, CA 92653
      TELEPHONE: (714) 586 - 6121          FAX: (714) 586 - 2217

 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*               HYDROGRAPH AT NODE 3.07 ROUTED TO NODE 3.10              *
*                                                                        *
 ************************************************************************

  FILE NAME: H307-118.INP
  TIME/DATE OF STUDY: 17: 4   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     3.00 TO NODE     3.07 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =     684.600 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.380 HOURS
        VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
        FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .700
        VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .253
        LOW LOSS FRACTION =  .284
        *HYDROGRAPH MODEL #2 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

        UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  12.077


        RUNOFF HYDROGRAPH LISTING LIMITS:
        MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
        MODEL TIME(HOURS) FOR END OF RESULTS = 20.00

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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
          1               1.202               49.746
          2               3.964              114.358
          3               7.890              162.530
          4              13.675              239.448
          5              21.667              330.870
          6              30.127              350.204
          7              37.450              303.154
          8              44.384              287.069
          9              50.916              270.383
         10              55.358              183.889
         11              58.958              149.036
         12              61.937              123.329
         13              64.594              109.967
         14              66.793               91.048
         15              68.852               85.233
         16              70.644               74.167
         17              72.370               71.459
         18              73.903               63.475
         19              75.381               61.188
         20              76.702               54.660
         21              77.970               52.522
         22              79.097               46.626
         23              80.171               44.463
```

24	81.160	40.937
25	82.109	39.316
26	82.963	35.320
27	83.762	33.087
28	84.505	30.748
29	85.208	29.098
30	85.853	26.712
31	86.445	24.495
32	87.027	24.091
33	87.597	23.602
34	88.114	21.429
35	88.550	18.039
36	88.985	18.002
37	89.420	17.995
38	89.848	17.729
39	90.259	17.029
40	90.670	16.996
41	91.081	17.003
42	91.475	16.332
43	91.809	13.824
44	92.136	13.527
45	92.463	13.555
46	92.788	13.432
47	93.094	12.700
48	93.397	12.544
49	93.700	12.544
50	94.001	12.455
51	94.271	11.157
52	94.516	10.151
53	94.761	10.153
54	95.006	10.124
55	95.235	9.486
56	95.456	9.145
57	95.677	9.160
58	95.898	9.145
59	96.101	8.400
60	96.288	7.739
61	96.475	7.748
62	96.662	7.748
63	96.856	8.030
64	97.060	8.451
65	97.264	8.433
66	97.468	8.451
67	97.639	7.072
68	97.727	3.627
69	97.811	3.477
70	97.895	3.505
71	97.980	3.515
72	98.065	3.486
73	98.149	3.486
74	98.234	3.524
75	98.318	3.486
76	98.403	3.505
77	98.487	3.505
78	98.572	3.486
79	98.656	3.505
80	98.741	3.505
81	98.825	3.487
82	98.910	3.505
83	98.994	3.468
84	99.048	2.231
85	99.087	1.650
86	99.127	1.650
87	99.167	1.649
88	99.207	1.650
89	99.247	1.650
90	99.286	1.631
91	99.331	1.837
92	99.370	1.631
93	99.409	1.631
94	99.449	1.631
95	99.488	1.631
96	99.528	1.631
97	99.567	1.631
98	99.606	1.631
99	99.646	1.631
100	99.685	1.631
101	99.724	1.631
102	99.764	1.631
103	99.803	1.631
104	99.843	1.631
105	99.882	1.631
106	99.921	1.631
107	99.961	1.631
108	100.000	1.621

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.30
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.46

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 73.9841
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 197.2979

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 75.0 150.0 225.0 300.0
16.083	88.2817	193.25	
16.167	89.6126	193.25	
16.250	91.0581	209.88	
16.333	92.5036	209.88	
16.417	94.0634	226.49	
16.500	95.6232	226.49	
16.583	97.3547	251.41	
16.667	99.0862	251.41	
16.750	100.9865	275.91	
16.833	102.8867	275.91	
16.917	104.8293	282.06	
17.000	106.7719	282.06	
17.083	108.6558	273.55	
17.167	110.5397	273.55	
17.250	112.4025	270.47	
17.333	114.2652	270.47	
17.417	116.0613	260.78	
17.500	117.8573	260.78	
17.583	119.4680	233.88	
17.667	121.0787	233.88	
17.750	122.5795	217.92	
17.833	124.0804	217.92	
17.917	125.4729	202.20	
18.000	126.8654	202.20	
18.083	128.1717	189.67	
18.167	129.4779	189.67	
18.250	130.6935	176.50	
18.333	131.9090	176.50	
18.417	133.0572	166.72	
18.500	134.2054	166.72	
18.583	135.2927	157.87	
18.667	136.3799	157.87	
18.750	137.4262	151.93	
18.833	138.4726	151.93	
18.917	139.4750	145.56	
19.000	140.4775	145.56	
19.083	141.4471	140.78	
19.167	142.4166	140.78	
19.250	143.3503	135.57	
19.333	144.2840	135.57	
19.417	145.1898	131.53	
19.500	146.0957	131.53	
19.583	146.9694	126.86	
19.667	147.8430	126.86	
19.750	148.6911	123.14	
19.833	149.5392	123.14	
19.917	150.3608	119.31	
20.000	151.1825	119.31	

****

FLOW PROCESS FROM NODE 3.07 TO NODE 3.10 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 20.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3470.00
DOWNSTREAM ELEVATION = 3320.00
CHANNEL LENGTH(FT) = 8100.00 MANNING'S FACTOR = .040
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 282.06
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 203.59
CHANNEL NORMAL VELOCITY FOR Q = 203.59 CFS = 5.73 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .771

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .533

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	98.3	92.0	92.0
14.167	98.3	92.8	92.8

14.250	103.2	93.9	93.9
14.333	103.2	95.1	95.1
14.417	109.4	96.8	96.8
14.500	109.4	98.5	98.5
14.583	117.5	101.0	101.0
14.667	117.5	103.4	103.4
14.750	127.7	106.6	106.6
14.833	127.7	109.7	109.7
14.917	138.6	113.9	113.9
15.000	138.6	117.8	117.8
15.083	148.6	123.1	123.1
15.167	148.6	127.7	127.7
15.250	158.6	133.5	133.5
15.333	158.6	138.2	138.2
15.417	166.9	143.8	143.8
15.500	166.9	148.3	148.3
15.583	171.7	153.8	153.8
15.667	171.7	158.0	158.0
15.750	175.2	162.7	162.7
15.833	175.2	165.9	165.9
15.917	179.0	169.0	169.0
16.000	179.0	171.1	171.1
16.083	193.3	173.3	173.3
16.167	193.3	175.1	175.1
16.250	209.9	177.2	177.2
16.333	209.9	181.0	181.0
16.417	226.5	187.5	187.5
16.500	226.5	193.8	193.8
16.583	251.4	202.4	202.4
16.667	251.4	209.6	209.6
16.750	275.9	218.6	218.6
16.833	275.9	227.7	227.7
16.917	282.1	240.4	240.4
17.000	282.1	251.1	251.1
17.083	273.5	264.3	264.3
17.167	273.5	271.7	271.7
17.250	270.5	277.2	277.2
17.333	270.5	278.1	278.1
17.417	260.8	275.7	275.7
17.500	260.8	273.9	273.9
17.583	233.9	272.1	272.1
17.667	233.9	269.3	269.3
17.750	217.9	264.8	264.8
17.833	217.9	257.4	257.4
17.917	202.2	244.8	244.8
18.000	202.2	235.9	235.9
18.083	189.7	226.3	226.3
18.167	189.7	218.7	218.7
18.250	176.5	209.9	209.9
18.333	176.5	203.3	203.3
18.417	166.7	196.0	196.0
18.500	166.7	190.1	190.1
18.583	157.9	182.8	182.8
18.667	157.9	177.5	177.5
18.750	151.9	171.8	171.8
18.833	151.9	167.3	167.3
18.917	145.6	162.3	162.3
19.000	145.6	158.8	158.8

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 197.298 AF
OUTFLOW VOLUME = 197.298 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*          HYDROGRAPH AT NODE 3.10 ROUTED TO NODE 3.12                   *
*                                                                        *
 **************************************************************************

  FILE NAME: H310-118.INP
  TIME/DATE OF STUDY: 17:11   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     3.00 TO NODE     3.10 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     955.500 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.773 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .600
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .266
         LOW LOSS FRACTION =  .304
         *HYDROGRAPH MODEL #3 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.100


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

==========================================================================
                    UNIT HYDROGRAPH DETERMINATION
--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                1.370                52.774
       2                4.740               129.816
       3                9.781               194.165
       4               17.738               306.479
       5               27.346               370.087
       6               36.245               342.788
       7               44.752               327.664
       8               52.298               290.668
       9               57.419               197.254
      10               61.381               152.626
      11               64.746               129.611
      12               67.459               104.508
      13               69.876                93.068
      14               71.970                80.676
      15               73.925                75.318
      16               75.673                67.329
      17               77.277                61.773
      18               78.755                56.923
      19               80.074                50.793
      20               81.312                47.695
      21               82.432                43.133
      22               83.485                40.572
      23               84.414                35.777
```

24	85.290	33.756
25	86.109	31.528
26	86.836	28.013
27	87.513	26.101
28	88.172	25.372
29	88.794	23.964
30	89.299	19.427
31	89.792	19.013
32	90.286	19.006
33	90.763	18.374
34	91.228	17.925
35	91.693	17.922
36	92.143	17.335
37	92.515	14.325
38	92.877	13.941
39	93.239	13.943
40	93.586	13.352
41	93.917	12.737
42	94.248	12.750
43	94.574	12.556
44	94.864	11.183
45	95.147	10.889
46	95.429	10.897
47	95.700	10.415
48	95.939	9.217
49	96.177	9.182
50	96.414	9.095
51	96.625	8.142
52	96.829	7.873
53	97.034	7.879
54	97.244	8.078
55	97.465	8.520
56	97.686	8.520
57	97.904	8.385
58	98.025	4.658
59	98.109	3.266
60	98.194	3.252
61	98.278	3.253
62	98.363	3.278
63	98.448	3.240
64	98.532	3.265
65	98.617	3.265
66	98.701	3.253
67	98.786	3.252
68	98.871	3.266
69	98.955	3.265
70	99.040	3.252
71	99.124	3.253
72	99.183	2.266
73	99.222	1.511
74	99.263	1.549
75	99.302	1.524
76	99.342	1.537
77	99.382	1.536
78	99.425	1.665
79	99.465	1.536
80	99.505	1.536
81	99.545	1.537
82	99.585	1.536
83	99.625	1.537
84	99.665	1.536
85	99.704	1.536
86	99.744	1.537
87	99.784	1.536
88	99.824	1.537
89	99.864	1.536
90	99.904	1.536
91	99.944	1.537
92	99.984	1.536
93	100.000	.630

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.40
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.36

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 111.4668
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 267.1672

==========

24-HOUR STORM
RUNOFF HYDROGRAPH

==========

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 100.0 200.0 300.0 400.0
16.083	111.4738	245.21	. . V . Q . . .
16.167	113.1626	245.21	. . V . Q . . .
16.250	114.8513	245.21	. . V . Q . . .
16.333	116.6991	268.30	. . V . Q . . .
16.417	118.5470	268.30	. . V . Q . . .
16.500	120.3948	268.30	. . V . Q . . .
16.583	122.4063	292.08	. . V . Q. . .
16.667	124.4179	292.08	. . V . Q. . .
16.750	126.4294	292.08	. . V . Q. . .
16.833	128.6664	324.81	. . V. . Q .
16.917	130.9034	324.81	. . V. . Q .
17.000	133.1404	324.81	. . V. . Q .
17.083	135.4845	340.37	. . V . Q .
17.167	137.8287	340.37	. . V . Q .
17.250	140.1728	340.37	. . V . Q .
17.333	142.4790	334.87	. .V . Q .
17.417	144.7853	334.87	. .V . Q .
17.500	147.0915	334.87	. . V . Q .
17.583	149.3524	328.27	. . V . Q .
17.667	151.6132	328.27	. . V . Q .
17.750	153.8740	328.27	. . V . Q .
17.833	155.9923	307.58	. . V Q .
17.917	158.1106	307.58	. . V Q .
18.000	160.2289	307.58	. . V Q .
18.083	162.1062	272.58	. . V Q . .
18.167	163.9835	272.58	. . V Q . .
18.250	165.8608	272.58	. . V Q . .
18.333	167.5753	248.94	. . QV . .
18.417	169.2897	248.94	. . QV . .
18.500	171.0042	248.94	. . QV . .
18.583	172.5829	229.22	. Q V . .
18.667	174.1615	229.22	. Q V . .
18.750	175.7402	229.22	. Q V . .
18.833	177.1911	210.68	.Q V . .
18.917	178.6421	210.68	.Q V . .
19.000	180.0930	210.68	.Q V . .

****

FLOW PROCESS FROM NODE 3.10 TO NODE 3.12 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3320.00
DOWNSTREAM ELEVATION = 3175.00
CHANNEL LENGTH(FT) = 8400.00 MANNING'S FACTOR = .035
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 340.37
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 247.54
CHANNEL NORMAL VELOCITY FOR Q = 247.54 CFS = 5.98 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .779

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .541

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	127.5	118.9	118.9
14.167	127.5	120.5	120.5
14.250	127.5	121.2	121.2
14.333	136.1	122.7	122.7
14.417	136.1	125.3	125.3
14.500	136.1	126.5	126.5
14.583	147.3	128.7	128.7
14.667	147.3	132.7	132.7
14.750	147.3	134.6	134.6
14.833	162.7	137.6	137.6
14.917	162.7	142.8	142.8
15.000	162.7	145.3	145.3
15.083	180.7	149.3	149.3
15.167	180.7	156.5	156.5

15.250	180.7	159.9	159.9
15.333	196.8	164.8	164.8
15.417	196.8	173.4	173.4
15.500	196.8	177.3	177.3
15.583	210.4	182.2	182.2
15.667	210.4	190.1	190.1
15.750	210.4	193.7	193.7
15.833	224.0	198.0	198.0
15.917	224.0	204.7	204.7
16.000	224.0	207.8	207.8
16.083	245.2	211.8	211.8
16.167	245.2	218.4	218.4
16.250	245.2	221.5	221.5
16.333	268.3	226.9	226.9
16.417	268.3	236.8	236.8
16.500	268.3	241.4	241.4
16.583	292.1	247.9	247.9
16.667	292.1	258.9	258.9
16.750	292.1	264.0	264.0
16.833	324.8	270.9	270.9
16.917	324.8	282.4	282.4
17.000	324.8	287.6	287.6
17.083	340.4	296.3	296.3
17.167	340.4	311.7	311.7
17.250	340.4	318.8	318.8
17.333	334.9	325.0	325.0
17.417	334.9	333.3	333.3
17.500	334.9	337.1	337.1
17.583	328.3	337.8	337.8
17.667	328.3	336.2	336.2
17.750	328.3	335.5	335.5
17.833	307.6	333.9	333.9
17.917	307.6	330.8	330.8
18.000	307.6	329.5	329.5
18.083	272.6	324.8	324.8
18.167	272.6	315.5	315.5
18.250	272.6	311.2	311.2
18.333	248.9	302.5	302.5
18.417	248.9	286.3	286.3
18.500	248.9	278.9	278.9
18.583	229.2	270.9	270.9
18.667	229.2	259.0	259.0
18.750	229.2	253.6	253.6
18.833	210.7	247.3	247.3
18.917	210.7	237.5	237.5
19.000	210.7	233.0	233.0

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 267.167 AF
OUTFLOW VOLUME = 267.167 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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                        Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*                HYDROGRAPH AT NODE 3.12 ROUTED TO NODE 4.13             *
*                                                                        *
 ************************************************************************

  FILE NAME: H312-118.INP
  TIME/DATE OF STUDY: 17:16   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     3.00 TO NODE     3.12 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1487.200 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.163 HOURS
         VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .600
         VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .276
         LOW LOSS FRACTION =  .320
         *HYDROGRAPH MODEL #4 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.411


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER         MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                1.498                67.354
       2                5.360               173.649
       3               11.381               270.740
       4               20.791               423.096
       5               31.235               469.621
       6               40.488               416.079
       7               49.685               413.530
       8               55.979               282.992
       9               60.617               208.574
      10               64.381               169.235
      11               67.396               135.577
      12               70.023               118.105
      13               72.303               102.518
      14               74.374                93.136
      15               76.257                84.639
      16               77.931                75.309
      17               79.480                69.641
      18               80.859                61.998
      19               82.123                56.818
      20               83.297                52.809
      21               84.326                46.268
      22               85.288                43.252
      23               86.179                40.061
```

24	86.961	35.148
25	87.697	33.127
26	88.414	32.212
27	89.033	27.864
28	89.573	24.250
29	90.112	24.255
30	90.642	23.810
31	91.151	22.894
32	91.660	22.870
33	92.150	22.071
34	92.556	18.253
35	92.952	17.787
36	93.345	17.698
37	93.715	16.628
38	94.077	16.253
39	94.438	16.255
40	94.770	14.933
41	95.079	13.894
42	95.389	13.906
43	95.686	13.389
44	95.949	11.820
45	96.210	11.710
46	96.464	11.434
47	96.691	10.189
48	96.914	10.052
49	97.138	10.086
50	97.376	10.688
51	97.618	10.880
52	97.860	10.859
53	98.014	6.962
54	98.107	4.158
55	98.199	4.158
56	98.292	4.165
57	98.384	4.137
58	98.477	4.172
59	98.569	4.158
60	98.662	4.158
61	98.754	4.158
62	98.847	4.158
63	98.939	4.158
64	99.032	4.158
65	99.124	4.144
66	99.187	2.831
67	99.230	1.942
68	99.273	1.956
69	99.317	1.956
70	99.360	1.956
71	99.405	2.011
72	99.449	1.956
73	99.492	1.956
74	99.536	1.956
75	99.579	1.956
76	99.623	1.956
77	99.666	1.956
78	99.710	1.956
79	99.753	1.956
80	99.797	1.956
81	99.840	1.956
82	99.884	1.956
83	99.927	1.956
84	99.971	1.956
85	100.000	1.325

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.49
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.27

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 184.3656
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 404.9699

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	125.0	250.0	375.0	500.0
16.083	157.9687	344.97			V	Q	
16.167	160.3445	344.97			V	Q	
16.250	162.7204	344.97			V	Q	
16.333	165.0962	344.97			V	Q	
16.417	167.7287	382.24			V	Q	
16.500	170.3613	382.24			V	Q	
16.583	172.9938	382.24			V	Q	
16.667	175.6263	382.24			V	Q	
16.750	178.5089	418.56			V	Q	
16.833	181.3916	418.56			V	Q	
16.917	184.2742	418.56			V	Q	
17.000	187.1568	418.56			V	Q	
17.083	190.3251	460.04			V	Q	
17.167	193.4934	460.04			V	Q	
17.250	196.6617	460.04			V	Q	
17.333	199.8300	460.04			V	Q	
17.417	203.0447	466.77			V	Q	
17.500	206.2594	466.77			V	Q	
17.583	209.4741	466.77			V	Q	
17.667	212.6888	466.77			V	Q	
17.750	215.8079	452.90			V	Q	
17.833	218.9270	452.90			V	Q	
17.917	222.0462	452.90			V	Q	
18.000	225.1653	452.90			V	Q	
18.083	228.1415	432.14			V	Q	
18.167	231.1176	432.14			V	Q	
18.250	234.0938	432.14			V	Q	
18.333	237.0699	432.14			V	Q	
18.417	239.7061	382.77			V	Q	
18.500	242.3423	382.77			V	Q	
18.583	244.9784	382.77			V	Q	
18.667	247.6146	382.77			V	Q	
18.750	249.9880	344.62			V	Q	
18.833	252.3614	344.62			V	Q	
18.917	254.7348	344.62			V	Q	
19.000	257.1082	344.62			V	Q	

****
FLOW PROCESS FROM NODE 3.12 TO NODE 4.13 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 35.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3175.00
DOWNSTREAM ELEVATION = 3095.00
CHANNEL LENGTH(FT) = 6000.00 MANNING'S FACTOR = .035
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 466.77
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 346.38
CHANNEL NORMAL VELOCITY FOR Q = 346.38 CFS = 5.90 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .776

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .585

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	185.2	174.9	174.9
14.167	185.2	175.4	175.4
14.250	185.2	177.6	177.6
14.333	185.2	182.0	182.0
14.417	200.6	183.9	183.9
14.500	200.6	184.7	184.7
14.583	200.6	188.3	188.3
14.667	200.6	195.5	195.5
14.750	221.5	198.5	198.5
14.833	221.5	199.7	199.7
14.917	221.5	204.7	204.7
15.000	221.5	214.5	214.5
15.083	250.3	218.6	218.6
15.167	250.3	220.3	220.3

15.250	250.3	227.2	227.2
15.333	250.3	240.7	240.7
15.417	278.8	246.3	246.3
15.500	278.8	248.7	248.7
15.583	278.8	255.8	255.8
15.667	278.8	269.3	269.3
15.750	305.1	274.9	274.9
15.833	305.1	277.2	277.2
15.917	305.1	283.8	283.8
16.000	305.1	296.3	296.3
16.083	345.0	301.4	301.4
16.167	345.0	303.6	303.6
16.250	345.0	313.0	313.0
16.333	345.0	331.7	331.7
16.417	382.2	339.5	339.5
16.500	382.2	342.7	342.7
16.583	382.2	352.0	352.0
16.667	382.2	369.7	369.7
16.750	418.6	377.0	377.0
16.833	418.6	380.1	380.1
16.917	418.6	389.2	389.2
17.000	418.6	406.3	406.3
17.083	460.0	413.5	413.5
17.167	460.0	416.5	416.5
17.250	460.0	426.6	426.6
17.333	460.0	446.2	446.2
17.417	466.8	454.3	454.3
17.500	466.8	457.6	457.6
17.583	466.8	460.5	460.5
17.667	466.8	464.2	464.2
17.750	452.9	465.7	465.7
17.833	452.9	466.3	466.3
17.917	452.9	463.6	463.6
18.000	452.9	457.3	457.3
18.083	432.1	454.7	454.7
18.167	432.1	453.7	453.7
18.250	432.1	448.7	448.7
18.333	432.1	439.0	439.0
18.417	382.8	435.0	435.0
18.500	382.8	433.3	433.3
18.583	382.8	422.0	422.0
18.667	382.8	399.1	399.1
18.750	344.6	389.5	389.5
18.833	344.6	385.6	385.6
18.917	344.6	375.7	375.7
19.000	344.6	357.5	357.5

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 404.970 AF
OUTFLOW VOLUME = 404.970 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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                      Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*              HYDROGRAPH AT NODE 4.09 ROUTED TO NODE 4.10               *
*                                                                        *
 **************************************************************************

  FILE NAME: H409-118.INP
  TIME/DATE OF STUDY: 17:26   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     4.00 TO NODE     4.09 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     672.000 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.680 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .700
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .302
         LOW LOSS FRACTION =  .341
         *HYDROGRAPH MODEL #3 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.881


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
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INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.481	40.111
2	5.244	101.938
3	10.954	154.699
4	20.114	248.149
5	30.449	279.968
6	39.318	240.251
7	47.952	233.897
8	54.277	171.356
9	58.852	123.922
10	62.511	99.132
11	65.583	83.214
12	68.194	70.730
13	70.472	61.710
14	72.580	57.100
15	74.450	50.662
16	76.186	47.048
17	77.758	42.568
18	79.164	38.102
19	80.471	35.390
20	81.661	32.250
21	82.767	29.972
22	83.754	26.712
23	84.662	24.600

24	85.512	23.034
25	86.260	20.256
26	86.980	19.519
27	87.682	19.008
28	88.282	16.263
29	88.818	14.510
30	89.354	14.515
31	89.881	14.278
32	90.388	13.732
33	90.893	13.704
34	91.390	13.462
35	91.806	11.270
36	92.204	10.767
37	92.601	10.766
38	92.983	10.332
39	93.350	9.957
40	93.718	9.967
41	94.074	9.637
42	94.394	8.663
43	94.711	8.590
44	95.026	8.553
45	95.308	7.640
46	95.581	7.375
47	95.853	7.378
48	96.106	6.857
49	96.337	6.249
50	96.568	6.248
51	96.802	6.348
52	97.052	6.767
53	97.303	6.816
54	97.551	6.711
55	97.697	3.961
56	97.801	2.822
57	97.906	2.822
58	98.010	2.823
59	98.114	2.822
60	98.218	2.817
61	98.322	2.827
62	98.426	2.817
63	98.531	2.827
64	98.635	2.817
65	98.739	2.827
66	98.843	2.817
67	98.947	2.817
68	99.034	2.350
69	99.084	1.354
70	99.133	1.324
71	99.182	1.334
72	99.231	1.334
73	99.280	1.324
74	99.333	1.444
75	99.382	1.324
76	99.431	1.324
77	99.480	1.324
78	99.529	1.324
79	99.578	1.324
80	99.627	1.324
81	99.675	1.324
82	99.724	1.324
83	99.773	1.324
84	99.822	1.324
85	99.871	1.324
86	99.920	1.324
87	99.969	1.324
88	100.000	.848

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.57
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.19

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 87.9864
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 178.3105

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	75.0	150.0	225.0	300.0
16.083	75.1603	165.66			V Q		
16.167	76.3012	165.66			V Q		
16.250	77.4421	165.66			V Q		
16.333	78.7005	182.72			V Q		
16.417	79.9589	182.72			V Q		
16.500	81.2173	182.72			V Q		
16.583	82.6033	201.24			V Q		
16.667	83.9893	201.24			V Q		
16.750	85.3752	201.24			V Q		
16.833	86.9334	226.24			V	Q	
16.917	88.4915	226.24			V	Q	
17.000	90.0497	226.24			V	Q	
17.083	91.6602	233.86			V	.Q	
17.167	93.2708	233.86			V	.Q	
17.250	94.8814	233.86			V	.Q	
17.333	96.4368	225.84			.V	Q	
17.417	97.9922	225.84			.V	Q	
17.500	99.5476	225.84			. V	Q	
17.583	101.0605	219.67			. V	Q.	
17.667	102.5734	219.67			. V	Q.	
17.750	104.0863	219.67			. V	Q.	
17.833	105.4427	196.95			. V Q	.	
17.917	106.7990	196.95			. V Q	.	
18.000	108.1554	196.95			. V Q	.	
18.083	109.3705	176.43			. QV	.	
18.167	110.5856	176.43			. QV	.	
18.250	111.8007	176.43			. Q V	.	
18.333	112.9121	161.38			.Q V	.	
18.417	114.0236	161.38			.Q V	.	
18.500	115.1350	161.38			.Q V	.	
18.583	116.1551	148.12			Q. V	.	
18.667	117.1753	148.12			Q. V	.	
18.750	118.1954	148.12			Q. V	.	
18.833	119.1442	137.77			Q . V	.	
19.000	120.0931	137.77			Q . V	.	
19.000	121.0419	137.77			Q . V	.	

****
FLOW PROCESS FROM NODE 4.09 TO NODE 4.10 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 25.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3400.00
DOWNSTREAM ELEVATION = 3340.00
CHANNEL LENGTH(FT) = 3800.00 MANNING'S FACTOR = .040
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 233.86
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 168.51
CHANNEL NORMAL VELOCITY FOR Q = 168.51 CFS = 4.85 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .740

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .599

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	85.7	81.4	81.4
14.167	85.7	81.8	81.8
14.250	85.7	84.2	84.2
14.333	91.9	85.1	85.1
14.417	91.9	85.7	85.7
14.500	91.9	89.4	89.4
14.583	100.0	90.9	90.9
14.667	100.0	91.8	91.8
14.750	100.0	96.7	96.7
14.833	111.3	98.7	98.7
14.917	111.3	99.9	99.9
15.000	111.3	106.8	106.8
15.083	124.0	109.5	109.5
15.167	124.0	111.1	111.1

15.250	124.0	118.9	118.9
15.333	134.8	122.0	122.0
15.417	134.8	123.6	123.6
15.500	134.8	130.3	130.3
15.583	143.7	133.0	133.0
15.667	143.7	134.4	134.4
15.750	143.7	140.0	140.0
15.833	151.6	142.2	142.2
15.917	151.6	143.5	143.5
16.000	151.6	148.3	148.3
16.083	165.7	150.3	150.3
16.167	165.7	151.6	151.6
16.250	165.7	160.0	160.0
16.333	182.7	163.4	163.4
16.417	182.7	165.4	165.4
16.500	182.7	175.8	175.8
16.583	201.2	179.9	179.9
16.667	201.2	182.3	182.3
16.750	201.2	193.7	193.7
16.833	226.2	198.2	198.2
16.917	226.2	201.0	201.0
17.000	226.2	216.1	216.1
17.083	233.9	222.2	222.2
17.167	233.9	224.9	224.9
17.250	233.9	230.3	230.3
17.333	225.8	232.4	232.4
17.417	225.8	233.0	233.0
17.500	225.8	228.7	228.7
17.583	219.7	227.0	227.0
17.667	219.7	226.1	226.1
17.750	219.7	222.2	222.2
17.833	196.9	220.7	220.7
17.917	196.9	219.2	219.2
18.000	196.9	205.9	205.9
18.083	176.4	200.5	200.5
18.167	176.4	197.6	197.6
18.250	176.4	184.9	184.9
18.333	161.4	179.8	179.8
18.417	161.4	177.2	177.2
18.500	161.4	167.7	167.7
18.583	148.1	163.9	163.9
18.667	148.1	161.9	161.9
18.750	148.1	153.6	153.6
18.833	137.8	150.3	150.3
18.917	137.8	148.6	148.6
19.000	137.8	142.1	142.1

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================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =     178.311 AF
    OUTFLOW VOLUME =     178.311 AF
    LOSS    VOLUME =        .000 AF
================================================================================

  END OF FLOOD ROUTING ANALYSIS
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                        Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*                HYDROGRAPH AT NODE 4.10 ROUTED TO NODE 4.12             *
*                                                                        *
 **************************************************************************

  FILE NAME: H410-118.INP
  TIME/DATE OF STUDY: 18:23   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     4.00 TO NODE     4.10 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    1614.700 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.898 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .600
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .267
         LOW LOSS FRACTION =  .300
         *HYDROGRAPH MODEL #3 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  13.172


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                1.280                83.309
       2                4.323               198.118
       3                8.777               289.879
       4               15.649               447.332
       5               24.479               574.795
       6               33.188               566.850
       7               40.983               507.439
       8               49.029               523.691
       9               54.704               369.394
      10               59.020               280.965
      11               62.473               224.757
      12               65.462               194.595
      13               67.908               159.174
      14               70.122               144.133
      15               72.063               126.324
      16               73.889               118.895
      17               75.522               106.302
      18               77.049                99.396
      19               78.439                90.419
      20               79.716                83.145
      21               80.890                76.410
      22               81.974                70.578
      23               82.997                66.605
```

24	83.909	59.325
25	84.765	55.744
26	85.553	51.302
27	86.308	49.109
28	86.964	42.731
29	87.596	41.108
30	88.209	39.955
31	88.791	37.830
32	89.262	30.669
33	89.723	30.013
34	90.184	30.008
35	90.636	29.404
36	91.071	28.320
37	91.505	28.299
38	91.940	28.276
39	92.322	24.879
40	92.663	22.191
41	93.004	22.184
42	93.344	22.130
43	93.664	20.848
44	93.976	20.299
45	94.288	20.299
46	94.595	20.011
47	94.869	17.833
48	95.136	17.390
49	95.391	16.616
50	95.637	15.981
51	95.861	14.612
52	96.084	14.473
53	96.307	14.506
54	96.518	13.725
55	96.709	12.463
56	96.900	12.428
57	97.091	12.428
58	97.291	13.007
59	97.498	13.470
60	97.704	13.447
61	97.908	13.250
62	98.020	7.334
63	98.099	5.143
64	98.179	5.154
65	98.258	5.142
66	98.336	5.131
67	98.415	5.143
68	98.494	5.142
69	98.573	5.143
70	98.652	5.142
71	98.732	5.166
72	98.810	5.119
73	98.890	5.166
74	98.968	5.119
75	99.048	5.166
76	99.127	5.142
77	99.181	3.544
78	99.219	2.455
79	99.256	2.409
80	99.293	2.410
81	99.330	2.432
82	99.367	2.410
83	99.406	2.501
84	99.443	2.410
85	99.480	2.409
86	99.517	2.410
87	99.554	2.410
88	99.591	2.409
89	99.628	2.410
90	99.665	2.409
91	99.702	2.410
92	99.739	2.410
93	99.776	2.409
94	99.813	2.410
95	99.850	2.409
96	99.887	2.410
97	99.924	2.410
98	99.961	2.409
99	99.998	2.410
100	100.000	.124

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.38
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.37

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 186.0408
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 453.8122

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 150.0 300.0 450.0 600.0
16.083	185.0978	405.99	V Q
16.167	187.8939	405.99	V Q
16.250	190.6900	405.99	V Q
16.333	193.7380	442.57	V Q
16.417	196.7860	442.57	V Q
16.500	199.8340	442.57	V Q
16.583	203.1196	477.08	V Q
16.667	206.4053	477.08	V Q
16.750	209.6909	477.08	V Q
16.833	213.3222	527.26	V Q
16.917	216.9535	527.26	V Q
17.000	220.5847	527.26	V Q
17.083	224.4341	558.93	V Q
17.167	228.2834	558.93	V Q
17.250	232.1328	558.93	V Q
17.333	235.9619	555.98	V Q
17.417	239.7909	555.98	V Q
17.500	243.6200	555.98	V Q
17.583	247.3535	542.10	V Q
17.667	251.0870	542.10	V Q
17.750	254.8205	542.10	V Q
17.833	258.4618	528.72	V Q
17.917	262.1031	528.72	V Q
18.000	265.7445	528.72	V Q
18.083	268.9958	472.10	V Q
18.167	272.2472	472.10	V Q
18.250	275.4986	472.10	V Q
18.333	278.4619	430.27	V Q
18.417	281.4252	430.27	V Q
18.500	284.3885	430.27	V Q
18.583	287.1161	396.04	VQ
18.667	289.8437	396.04	VQ
18.750	292.5713	396.04	VQ
18.833	295.0933	366.20	Q V
18.917	297.6153	366.20	Q V
19.000	300.1374	366.20	Q V

****
FLOW PROCESS FROM NODE 4.10 TO NODE 4.12 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 30.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 3340.00
DOWNSTREAM ELEVATION = 3185.00
CHANNEL LENGTH(FT) = 8400.00 MANNING'S FACTOR = .035
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 558.93
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 408.73
CHANNEL NORMAL VELOCITY FOR Q = 408.73 CFS = 7.21 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .809

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .595

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	212.6	200.9	200.9
14.167	212.6	202.5	202.5
14.250	212.6	203.2	203.2
14.333	226.3	208.1	208.1
14.417	226.3	210.8	210.8
14.500	226.3	211.9	211.9
14.583	243.9	219.3	219.3
14.667	243.9	223.5	223.5
14.750	243.9	225.2	225.2
14.833	267.4	234.8	234.8
14.917	267.4	240.2	240.2
15.000	267.4	242.4	242.4
15.083	296.1	255.3	255.3
15.167	296.1	262.5	262.5

15.250	296.1	265.4	265.4
15.333	322.9	281.3	281.3
15.417	322.9	290.1	290.1
15.500	322.9	293.7	293.7
15.583	344.7	308.8	308.8
15.667	344.7	317.2	317.2
15.750	344.7	320.6	320.6
15.833	369.4	333.1	333.1
15.917	369.4	340.0	340.0
16.000	369.4	342.8	342.8
16.083	406.0	356.5	356.5
16.167	406.0	364.2	364.2
16.250	406.0	367.3	367.3
16.333	442.6	387.2	387.2
16.417	442.6	398.4	398.4
16.500	442.6	402.9	402.9
16.583	477.1	423.4	423.4
16.667	477.1	434.8	434.8
16.750	477.1	439.4	439.4
16.833	527.3	458.9	458.9
16.917	527.3	469.7	469.7
17.000	527.3	474.1	474.1
17.083	558.9	501.5	501.5
17.167	558.9	516.8	516.8
17.250	558.9	523.0	523.0
17.333	556.0	541.7	541.7
17.417	556.0	552.0	552.0
17.500	556.0	556.1	556.1
17.583	542.1	556.3	556.3
17.667	542.1	556.1	556.1
17.750	542.1	556.0	556.0
17.833	528.7	548.9	548.9
17.917	528.7	544.9	544.9
18.000	528.7	543.2	543.2
18.083	472.1	535.7	535.7
18.167	472.1	531.6	531.6
18.250	472.1	529.9	529.9
18.333	430.3	500.3	500.3
18.417	430.3	483.5	483.5
18.500	430.3	476.7	476.7
18.583	396.0	452.6	452.6
18.667	396.0	439.3	439.3
18.750	396.0	433.9	433.9
18.833	366.2	414.3	414.3
18.917	366.2	403.4	403.4
19.000	366.2	399.0	399.0

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 453.812 AF
OUTFLOW VOLUME = 453.811 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

          F L O O D   R O U T I N G   A N A L Y S I S
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 ************************* DESCRIPTION OF STUDY *************************
*                          DESIGN NODE 1.18                              *
*              HYDROGRAPH AT NODE 4.12 ROUTED TO NODE 4.13               *
*                                                                        *
 **************************************************************************

  FILE NAME: H412-118.INP
  TIME/DATE OF STUDY: 22:25   6/25/1992

**************************************************************************
  FLOW PROCESS FROM NODE     4.00 TO NODE     4.12 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    2467.000 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.222 HOURS
         VALLEY(DEVELOPED):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .000
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .150
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .600
         VALLEY(UNDEVELOPED/DESERT):
                 "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .274
         LOW LOSS FRACTION =  .314
         *HYDROGRAPH MODEL #4 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.002


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
--------------------------------------------------------------------------
       1                1.458               108.723
       2                5.163               276.392
       3               10.861               424.990
       4               19.825               668.578
       5               30.043               762.194
       6               39.150               679.239
       7               48.271               680.361
       8               54.889               493.622
       9               59.679               357.247
      10               63.490               284.261
      11               66.616               233.151
      12               69.270               197.964
      13               71.555               170.453
      14               73.673               157.947
      15               75.546               139.692
      16               77.263               128.088
      17               78.830               116.919
      18               80.222               103.814
      19               81.523                97.011
      20               82.702                87.967
      21               83.777                80.198
      22               84.753                72.726
      23               85.649                66.901
```

24	86.489	62.617
25	87.220	54.546
26	87.930	52.922
27	88.616	51.195
28	89.179	41.975
29	89.704	39.163
30	90.229	39.170
31	90.739	38.032
32	91.234	36.923
33	91.729	36.929
34	92.199	35.060
35	92.596	29.596
36	92.987	29.160
37	93.376	29.035
38	93.741	27.238
39	94.099	26.710
40	94.457	26.699
41	94.789	24.767
42	95.081	21.760
43	95.368	21.370
44	95.647	20.815
45	95.902	19.034
46	96.155	18.913
47	96.407	18.767
48	96.632	16.811
49	96.850	16.204
50	97.067	16.229
51	97.294	16.904
52	97.529	17.556
53	97.765	17.557
54	97.970	15.290
55	98.065	7.143
56	98.156	6.735
57	98.246	6.712
58	98.335	6.689
59	98.426	6.736
60	98.516	6.712
61	98.605	6.689
62	98.696	6.735
63	98.786	6.712
64	98.876	6.713
65	98.966	6.712
66	99.056	6.713
67	99.143	6.526
68	99.196	3.915
69	99.238	3.146
70	99.280	3.146
71	99.323	3.170
72	99.365	3.170
73	99.409	3.263
74	99.451	3.170
75	99.494	3.170
76	99.536	3.170
77	99.579	3.169
78	99.621	3.170
79	99.664	3.170
80	99.706	3.170
81	99.749	3.170
82	99.791	3.169
83	99.834	3.170
84	99.876	3.170
85	99.919	3.170
86	99.961	3.170
87	100.000	2.896

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.46
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.30

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 300.3129
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 677.2865

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

                    24-HOUR   STORM
                 RUNOFF   HYDROGRAPH

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      200.0     400.0     600.0     800.0
--------------------------------------------------------------------------
  16.083    261.6689    568.96  .         .    V    .       Q .         .
  16.167    265.5873    568.96  .         .    V    .       Q .         .
  16.250    269.5057    568.96  .         .    V    .       Q .         .
  16.333    273.4241    568.96  .         .     V   .       Q .         .
  16.417    277.7671    630.59  .         .     V   .         .Q        .
  16.500    282.1100    630.59  .         .     V   .         .Q        .
  16.583    286.4529    630.59  .         .     V   .         .Q        .
  16.667    290.7958    630.59  .         .      V  .         .Q        .
  16.750    295.5365    688.34  .         .      V  .         .   Q     .
  16.833    300.2772    688.34  .         .      V  .         .   Q     .
  16.917    305.0178    688.34  .         .       V .         .   Q     .
  17.000    309.7585    688.34  .         .       V .         .   Q     .
  17.083    314.9672    756.30  .         .       V .         .      Q  .
  17.167    320.1758    756.30  .         .       V .         .      Q  .
  17.250    325.3845    756.30  .         .        V.         .      Q  .
  17.333    330.5932    756.30  .         .        V.         .      Q  .
  17.417    335.9104    772.06  .         .        V.         .       Q .
  17.500    341.2277    772.06  .         .         V         .       Q .
  17.583    346.5449    772.06  .         .         V         .       Q .
  17.667    351.8621    772.06  .         .         V         .       Q .
  17.750    357.0335    750.89  .         .         .V        .      Q  .
  17.833    362.2050    750.89  .         .         .V        .      Q  .
  17.917    367.3764    750.89  .         .         .V        .      Q  .
  18.000    372.5478    750.89  .         .         . V       .      Q  .
  18.083    377.5112    720.69  .         .         . V       .     Q   .
  18.167    382.4747    720.69  .         .         . V       .     Q   .
  18.250    387.4381    720.69  .         .         . V       .     Q   .
  18.333    392.4016    720.69  .         .         .  V      .     Q   .
  18.417    396.8489    645.76  .         .         .  V      . Q       .
  18.500    401.2963    645.76  .         .         .  V      . Q       .
  18.583    405.7437    645.76  .         .         .  V      . Q       .
  18.667    410.1911    645.76  .         .         .   V     . Q       .
  18.750    414.1880    580.36  .         .         .   V    Q.         .
  18.833    418.1850    580.36  .         .         .   V    Q.         .
  18.917    422.1819    580.36  .         .         .   V    Q.         .
  19.000    426.1789    580.36  .         .         .    V   Q.         .

******************************************************************************
  FLOW PROCESS FROM NODE     4.12 TO NODE     4.13 IS CODE =  52
--------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   35.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    3185.00
          DOWNSTREAM ELEVATION =    3095.00
          CHANNEL LENGTH(FT) =    6800.00     MANNING'S FACTOR =  .035
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =   772.06
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =   565.52
          CHANNEL NORMAL VELOCITY FOR Q =   565.52 CFS =   6.99 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .804

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .618


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                OUTFLOW LESS
         MODEL        INFLOW      ROUTED        LOSS
          TIME      (STREAM 1)    FLOW      (STREAM 1)
         (HRS)        (CFS)       (CFS)        (CFS)
         14.083        307.5       290.9        290.9
         14.167        307.5       291.6        291.6
         14.250        307.5       295.6        295.6
         14.333        307.5       303.0        303.0
         14.417        332.5       305.8        305.8
         14.500        332.5       306.9        306.9
         14.583        332.5       313.3        313.3
         14.667        332.5       325.2        325.2
         14.750        366.2       329.7        329.7
         14.833        366.2       331.4        331.4
         14.917        366.2       340.3        340.3
         15.000        366.2       356.3        356.3
         15.083        412.7       362.4        362.4
         15.167        412.7       364.7        364.7
```

15.250	412.7	376.9	376.9
15.333	412.7	399.0	399.0
15.417	459.5	407.4	407.4
15.500	459.5	410.7	410.7
15.583	459.5	423.2	423.2
15.667	459.5	445.6	445.6
15.750	503.0	454.2	454.2
15.833	503.0	457.4	457.4
15.917	503.0	469.2	469.2
16.000	503.0	490.1	490.1
16.083	569.0	498.1	498.1
16.167	569.0	501.1	501.1
16.250	569.0	518.3	518.3
16.333	569.0	549.6	549.6
16.417	630.6	561.5	561.5
16.500	630.6	566.1	566.1
16.583	630.6	582.8	582.8
16.667	630.6	612.3	612.3
16.750	688.3	623.6	623.6
16.833	688.3	627.9	627.9
16.917	688.3	643.6	643.6
17.000	688.3	671.2	671.2
17.083	756.3	681.8	681.8
17.167	756.3	685.8	685.8
17.250	756.3	703.9	703.9
17.333	756.3	736.2	736.2
17.417	772.1	748.6	748.6
17.500	772.1	753.4	753.4
17.583	772.1	759.0	759.0
17.667	772.1	767.1	767.1
17.750	750.9	770.2	770.2
17.833	750.9	771.3	771.3
17.917	750.9	766.7	766.7
18.000	750.9	756.9	756.9
18.083	720.7	753.2	753.2
18.167	720.7	751.8	751.8
18.250	720.7	743.9	743.9
18.333	720.7	729.6	729.6
18.417	645.8	724.1	724.1
18.500	645.8	722.0	722.0
18.583	645.8	703.0	703.0
18.667	645.8	667.7	667.7
18.750	580.4	654.1	654.1
18.833	580.4	649.0	649.0
18.917	580.4	631.1	631.1
19.000	580.4	599.8	599.8

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 677.287 AF
OUTFLOW VOLUME = 677.286 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

118-275

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

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

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 ************************** DESCRIPTION OF STUDY **************************
*                                                                          *
*  D E S I G N   H Y D R O G R A P H   A T   N O D E  1 . 1 8             *
*                                                                          *
 ***************************************************************************

  FILE NAME: H118-118.INP
  TIME/DATE OF STUDY:  0:44   6/26/1992

*****************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.17 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
=============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   14484.000 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.262 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .223
         LOW LOSS FRACTION =  .254
         *HYDROGRAPH MODEL #4 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.736


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

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

-----------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
-----------------------------------------------------------------------------
        1                1.168               511.647
        2                4.056              1264.532
        3                8.731              2047.430
        4               16.055              3207.323
        5               24.995              3914.910
        6               34.485              4155.771
        7               46.129              5098.735
        8               55.909              4283.176
        9               62.911              3066.320
       10               68.368              2389.308
       11               72.607              1856.540
       12               75.927              1453.646
       13               78.590              1166.411
       14               80.910              1015.795
       15               82.790               823.612
       16               84.439               721.868
       17               85.808               599.577
       18               86.968               508.123
       19               88.031               465.411
       20               88.987               418.557
       21               89.880               391.261
       22               90.666               344.112
       23               91.403               322.669
```

24	92.066	290.285
25	92.600	233.962
26	93.094	216.452
27	93.556	201.995
28	93.961	177.605
29	94.279	139.341
30	94.596	138.763
31	94.911	137.700
32	95.209	130.477
33	95.503	129.054
34	95.798	128.994
35	96.051	110.755
36	96.278	99.629
37	96.506	99.629
38	96.728	97.391
39	96.935	90.485
40	97.140	89.937
41	97.345	89.412
42	97.528	80.355
43	97.704	77.047
44	97.860	68.407
45	97.999	60.683
46	98.124	54.936
47	98.250	54.880
48	98.373	54.004
49	98.485	49.220
50	98.596	48.378
51	98.706	48.378
52	98.821	50.316
53	98.939	51.602
54	99.057	51.569
55	99.156	43.450
56	99.195	16.949
57	99.231	16.134
58	99.268	16.164
59	99.305	16.107
60	99.342	16.137
61	99.379	16.134
62	99.416	16.077
63	99.453	16.194
64	99.489	16.137
65	99.526	16.134
66	99.563	16.134
67	99.600	16.077
68	99.636	16.077
69	99.661	10.798
70	99.679	7.604
71	99.696	7.544
72	99.713	7.604
73	99.730	7.544
74	99.748	7.718
75	99.768	8.593
76	99.785	7.718
77	99.803	7.718
78	99.820	7.721
79	99.838	7.721
80	99.856	7.718
81	99.873	7.718
82	99.891	7.721
83	99.909	7.721
84	99.926	7.718
85	99.944	7.718
86	99.961	7.721
87	99.979	7.721
88	99.997	7.718
89	100.000	1.430

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.18
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.57

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1426.8020
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 4312.6070

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.     1300.0    2600.0    3900.0    5200.0
--------------------------------------------------------------------------
  16.083   1726.8450   3630.18  .         .     V   .      Q  .         .
  16.167   1751.8460   3630.18  .         .     V   .      Q  .         .
  16.250   1776.8470   3630.18  .         .     V   .      Q  .         .
  16.333   1801.8490   3630.18  .         .     V   .      Q  .         .
  16.417   1829.8210   4061.54  .         .     V   .         .Q        .
  16.500   1857.7930   4061.54  .         .      V  .         .Q        .
  16.583   1885.7650   4061.54  .         .      V  .         .Q        .
  16.667   1913.7370   4061.54  .         .      V  .         .Q        .
  16.750   1944.4470   4459.17  .         .       V .         .   Q     .
  16.833   1975.1580   4459.17  .         .       V .         .   Q     .
  16.917   2005.8680   4459.17  .         .       V .         .   Q     .
  17.000   2036.5780   4459.17  .         .       V .         .   Q     .
  17.083   2070.0660   4862.34  .         .        V.         .      Q  .
  17.167   2103.5530   4862.34  .         .        V.         .      Q  .
  17.250   2137.0400   4862.34  .         .        V.         .      Q  .
  17.333   2170.5270   4862.34  .         .         V         .      Q  .
  17.417   2205.1200   5022.90  .         .         V         .       Q .
  17.500   2239.7130   5022.90  .         .         V         .       Q .
  17.583   2274.3060   5022.90  .         .          V        .       Q .
  17.667   2308.8990   5022.90  .         .          V        .       Q .
  17.750   2344.0310   5101.12  .         .         .V        .        Q.
  17.833   2379.1620   5101.12  .         .         . V       .        Q.
  17.917   2414.2940   5101.12  .         .         . V       .        Q.
  18.000   2449.4250   5101.12  .         .         . V       .        Q.
  18.083   2485.1310   5184.40  .         .         .  V      .        Q.
  18.167   2520.8360   5184.40  .         .         .  V      .        Q.
  18.250   2556.5410   5184.40  .         .         .  V      .        Q.
  18.333   2592.2470   5184.40  .         .         .   V     .        Q.
  18.417   2625.4260   4817.69  .         .         .   V     .      Q  .
  18.500   2658.6060   4817.69  .         .         .   V     .      Q  .
  18.583   2691.7860   4817.69  .         .         .   V     .      Q  .
  18.667   2724.9650   4817.69  .         .         .    V    .      Q  .
  18.750   2754.7220   4320.62  .         .         .    V    .  Q      .
  18.833   2784.4780   4320.62  .         .         .    V    .  Q      .
  18.917   2814.2340   4320.62  .         .         .     V   .  Q      .
  19.000   2843.9910   4320.62  .         .         .     V   .  Q      .

**************************************************************************
  FLOW PROCESS FROM NODE     2.00 TO NODE     1.17 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    7823.000 ACRES
         BASEFLOW =    .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.188 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .255
         LOW LOSS FRACTION =  .287
         *HYDROGRAPH MODEL #4 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.235


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

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

--------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
```

NUMBER	MEAN VALUES	ORDINATES(CFS)
1	1.208	285.720
2	4.248	719.119
3	9.265	1186.509
4	17.050	1841.277
5	26.402	2212.185
6	36.402	2365.030
7	48.703	2909.522
8	57.860	2165.808
9	64.619	1598.853
10	69.844	1235.830
11	73.864	950.822
12	77.022	746.939
13	79.613	612.741
14	81.814	520.600
15	83.624	428.109
16	85.187	369.626
17	86.478	305.484
18	87.602	265.851
19	88.641	245.694
20	89.589	224.217
21	90.428	198.479
22	91.211	185.044
23	91.922	168.188
24	92.497	136.183
25	93.012	121.716
26	93.493	113.749
27	93.925	102.227
28	94.257	78.591
29	94.585	77.474
30	94.910	76.893
31	95.218	72.849
32	95.523	72.073
33	95.826	71.781
34	96.080	60.100
35	96.314	55.280
36	96.548	55.264
37	96.772	53.111
38	96.983	49.865
39	97.194	49.883
40	97.399	48.499
41	97.582	43.168
42	97.762	42.677
43	97.923	38.166
44	98.058	31.839
45	98.188	30.627
46	98.317	30.627
47	98.438	28.642
48	98.552	27.016
49	98.667	27.017
50	98.783	27.564
51	98.905	28.793
52	99.027	28.806
53	99.143	27.550
54	99.188	10.522
55	99.226	9.037
56	99.264	9.006
57	99.302	8.976
58	99.340	9.035
59	99.378	9.006
60	99.416	9.005
61	99.454	9.006
62	99.492	9.006
63	99.531	9.037
64	99.568	8.976
65	99.607	9.005
66	99.643	8.734
67	99.665	5.184
68	99.683	4.215
69	99.701	4.275
70	99.719	4.246
71	99.737	4.214
72	99.756	4.457
73	99.774	4.215
74	99.792	4.215
75	99.809	4.215
76	99.827	4.215
77	99.845	4.214
78	99.863	4.215
79	99.881	4.215
80	99.898	4.214
81	99.916	4.215
82	99.934	4.215
83	99.952	4.215
84	99.970	4.215
85	99.988	4.214
86	100.000	2.943

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.34
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.42

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 871.4141
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 2228.5680

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

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

==============================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      700.0    1400.0    2100.0    2800.0
------------------------------------------------------------------------------
  16.083    902.2612   1917.07  .         .     V   .      Q  .         .
  16.167    915.4642   1917.07  .         .     V   .      Q  .         .
  16.250    928.6672   1917.07  .         .     V   .      Q  .         .
  16.333    941.8702   1917.07  .         .     V   .      Q  .         .
  16.417    956.6072   2139.81  .         .      V  .         Q         .
  16.500    971.3442   2139.81  .         .      V  .         Q         .
  16.583    986.0812   2139.81  .         .      V  .         Q         .
  16.667   1000.8180   2139.81  .         .      V  .         Q         .
  16.750   1017.0280   2353.59  .         .       V .         .  Q      .
  16.833   1033.2370   2353.59  .         .       V .         .  Q      .
  16.917   1049.4460   2353.59  .         .       V .         .  Q      .
  17.000   1065.6550   2353.59  .         .        V.         .  Q      .
  17.083   1083.3110   2563.54  .         .        V.         .     Q   .
  17.167   1100.9660   2563.54  .         .        V.         .     Q   .
  17.250   1118.6210   2563.54  .         .         V         .     Q   .
  17.333   1136.2760   2563.54  .         .         V         .     Q   .
  17.417   1154.4330   2636.28  .         .         V         .      Q  .
  17.500   1172.5890   2636.28  .         .          V        .      Q  .
  17.583   1190.7450   2636.28  .         .          V        .      Q  .
  17.667   1208.9010   2636.28  .         .          V        .      Q  .
  17.750   1227.4190   2688.73  .         .         . V       .       Q .
  17.833   1245.9360   2688.73  .         .         . V       .       Q .
  17.917   1264.4540   2688.73  .         .         . V       .       Q .
  18.000   1282.9710   2688.73  .         .         .  V      .       Q .
  18.083   1301.6920   2718.30  .         .         .  V      .       Q .
  18.167   1320.4130   2718.30  .         .         .  V      .       Q .
  18.250   1339.1340   2718.30  .         .         .   V     .       Q .
  18.333   1357.8550   2718.30  .         .         .   V     .       Q .
  18.417   1374.8160   2462.63  .         .         .   V     .    Q    .
  18.500   1391.7760   2462.63  .         .         .   V     .    Q    .
  18.583   1408.7360   2462.63  .         .         .    V    .    Q    .
  18.667   1425.6960   2462.63  .         .         .    V    .    Q    .
  18.750   1440.9100   2209.09  .         .         .    V   .Q         .
  18.833   1456.1250   2209.09  .         .         .     V  .Q         .
  18.917   1471.3390   2209.09  .         .         .     V  .Q         .
  19.000   1486.5530   2209.09  .         .         .     V  .Q         .

******************************************************************************
  FLOW PROCESS FROM NODE      1.17 TO NODE      1.18 IS CODE =  52
------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==============================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =    30.00      CHANNEL Z =  2.00
          UPSTREAM ELEVATION =     3070.00
          DOWNSTREAM ELEVATION =     2980.00
          CHANNEL LENGTH(FT) =     9400.00      MANNING'S FACTOR =  .030
          CONSTANT LOSS RATE(CFS) =      .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  7902.69
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  5915.43
          CHANNEL NORMAL VELOCITY FOR Q =  5915.43 CFS =  15.50 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .901

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .802


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                                OUTFLOW LESS
         MODEL         INFLOW      ROUTED        LOSS
          TIME       (STREAM 1)    FLOW       (STREAM 1)
         (HRS)        (CFS)       (CFS)         (CFS)
         16.083        5547.3      4854.9        4854.9
         16.167        5547.3      4956.1        4956.1
         16.250        5547.3      5430.1        5430.1
         16.333        5547.3      5524.0        5524.0
         16.417        6201.4      5542.7        5542.7
         16.500        6201.4      5640.1        5640.1
         16.583        6201.4      6090.1        6090.1
         16.667        6201.4      6179.3        6179.3
         16.750        6812.8      6197.0        6197.0
         16.833        6812.8      6288.1        6288.1
         16.917        6812.8      6708.8        6708.8
         17.000        6812.8      6792.2        6792.2
         17.083        7425.9      6808.7        6808.7
         17.167        7425.9      6899.8        6899.8
```

17.250	7425.9	7321.6	7321.6
17.333	7425.9	7405.2	7405.2
17.417	7659.2	7421.8	7421.8
17.500	7659.2	7458.5	7458.5
17.583	7659.2	7619.4	7619.4
17.667	7659.2	7651.3	7651.3
17.750	7789.8	7657.6	7657.6
17.833	7789.8	7677.6	7677.6
17.917	7789.8	7767.6	7767.6
18.000	7789.8	7785.4	7785.4
18.083	7902.7	7789.0	7789.0
18.167	7902.7	7805.8	7805.8
18.250	7902.7	7883.5	7883.5
18.333	7902.7	7898.9	7898.9
18.417	7280.3	7901.9	7901.9
18.500	7280.3	7813.4	7813.4
18.583	7280.3	7385.9	7385.9
18.667	7280.3	7301.3	7301.3
18.750	6529.7	7284.5	7284.5
18.833	6529.7	7173.6	7173.6
18.917	6529.7	6657.3	6657.3
19.000	6529.7	6555.0	6555.0

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 6541.175 AF
OUTFLOW VOLUME = 6541.174 AF
LOSS VOLUME = .000 AF

FLOW PROCESS FROM NODE 3.00 TO NODE 4.13 IS CODE = 1

>>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #3)

WATERSHED AREA = 1646.000 ACRES
BASEFLOW = .000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.445 HOURS
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = .250
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = .250
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = .250
VALLEY(UNDEVELOPED/DESERT):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = .250
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = .269
LOW LOSS FRACTION = .311
HYDROGRAPH MODEL #4 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= .64
SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 1.10
SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.36
SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 1.97
SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 2.50
SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 4.95

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = .460
30-MINUTE FACTOR = .496
1-HOUR FACTOR = .517
3-HOUR FACTOR = .856
6-HOUR FACTOR = .936
24-HOUR FACTOR = .961

UNIT HYDROGRAPH TIME UNIT = 20.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 13.633

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	1.081	53.793
2	3.649	127.814
3	7.628	197.990
4	13.910	312.653
5	21.904	397.840
6	30.479	426.723
7	40.072	477.389
8	51.075	547.575
9	58.689	378.921
10	64.637	296.026
11	69.371	235.597
12	73.117	186.382
13	76.121	149.494
14	78.565	121.659
15	80.733	107.896
16	82.511	88.460
17	84.073	77.739
18	85.411	66.606
19	86.546	56.485

20	87.547	49.819
21	88.492	46.987
22	89.348	42.634
23	90.135	39.169
24	90.853	35.699
25	91.518	33.107
26	92.120	29.985
27	92.609	24.297
28	93.067	22.822
29	93.495	21.289
30	93.889	19.631
31	94.190	14.960
32	94.483	14.589
33	94.776	14.585
34	95.059	14.084
35	95.332	13.573
36	95.605	13.569
37	95.874	13.389
38	96.094	10.947
39	96.301	10.331
40	96.509	10.330
41	96.712	10.110
42	96.900	9.375
43	97.088	9.315
44	97.275	9.315
45	97.449	8.648
46	97.608	7.957
47	97.768	7.960
48	97.925	7.777
49	98.045	6.003
50	98.161	5.764
51	98.277	5.768
52	98.390	5.622
53	98.493	5.130
54	98.595	5.084
55	98.697	5.083
56	98.803	5.254
57	98.912	5.426
58	99.021	5.422
59	99.128	5.319
60	99.178	2.497
61	99.212	1.693
62	99.246	1.697
63	99.280	1.697
64	99.314	1.697
65	99.348	1.696
66	99.382	1.697
67	99.417	1.696
68	99.450	1.690
69	99.485	1.704
70	99.519	1.690
71	99.553	1.704
72	99.587	1.690
73	99.621	1.697
74	99.651	1.512
75	99.668	.849
76	99.684	.798
77	99.701	.805
78	99.717	.792
79	99.733	.806
80	99.749	.806
81	99.767	.906
82	99.783	.806
83	99.799	.806
84	99.816	.806
85	99.832	.806
86	99.848	.806
87	99.864	.806
88	99.880	.806
89	99.897	.806
90	99.913	.806
91	99.929	.806
92	99.945	.806
93	99.961	.806
94	99.978	.806
95	99.994	.806
96	100.000	.311

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.45
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.31

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 198.3476
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 453.9126

118-280

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

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

==========================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------
TIME(HRS) VOLUME(AF)   Q(CFS) 0.      150.0     300.0     450.0     600.0
--------------------------------------------------------------------------
  16.083    176.0464    361.16  .         .    V    .   Q     .         .
  16.167    178.5338    361.16  .         .    V    .   Q     .         .
  16.250    181.0211    361.16  .         .    V    .   Q     .         .
  16.333    183.5084    361.16  .         .     V   .   Q     .         .
  16.417    186.3172    407.84  .         .     V   .      Q  .         .
  16.500    189.1260    407.84  .         .     V   .      Q  .         .
  16.583    191.9348    407.84  .         .     V   .      Q  .         .
  16.667    194.7436    407.84  .         .      V  .      Q  .         .
  16.750    197.8257    447.52  .         .      V  .        Q.         .
  16.833    200.9078    447.52  .         .      V  .        Q.         .
  16.917    203.9898    447.52  .         .      V  .        Q.         .
  17.000    207.0719    447.52  .         .       V .        Q.         .
  17.083    210.4433    489.52  .         .       V .         . Q       .
  17.167    213.8146    489.52  .         .       V .         . Q       .
  17.250    217.1859    489.52  .         .        V.         . Q       .
  17.333    220.5573    489.52  .         .        V.         . Q       .
  17.417    224.1006    514.50  .         .        V.         .   Q     .
  17.500    227.6440    514.50  .         .         V         .   Q     .
  17.583    231.1874    514.50  .         .         V         .   Q     .
  17.667    234.7308    514.50  .         .         V         .   Q     .
  17.750    238.2971    517.82  .         .         V         .   Q     .
  17.833    241.8633    517.82  .         .          V        .   Q     .
  17.917    245.4296    517.82  .         .          V        .   Q     .
  18.000    248.9959    517.82  .         .          V        .   Q     .
  18.083    252.6257    527.05  .         .         . V       .    Q    .
  18.167    256.2556    527.05  .         .         . V       .    Q    .
  18.250    259.8854    527.05  .         .         . V       .    Q    .
  18.333    263.5153    527.05  .         .         .  V      .    Q    .
  18.417    267.1103    521.99  .         .         .  V      .   Q     .
  18.500    270.7053    521.99  .         .         .  V      .   Q     .
  18.583    274.3003    521.99  .         .         .   V     .   Q     .
  18.667    277.8953    521.99  .         .         .   V     .   Q     .
  18.750    281.1197    468.18  .         .         .   V     .Q        .
  18.833    284.3441    468.18  .         .         .    V    .Q        .
  18.917    287.5685    468.18  .         .         .    V    .Q        .
  19.000    290.7928    468.18  .         .         .    V    .Q        .

**************************************************************************
  FLOW PROCESS FROM NODE     4.00 TO NODE     4.13 IS CODE =   1
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  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #3)

         WATERSHED AREA =    2605.000 ACRES
         BASEFLOW =    .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.492 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .250
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .268
         LOW LOSS FRACTION =  .307
         *HYDROGRAPH MODEL #4 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR =  .460
          30-MINUTE FACTOR =  .496
           1-HOUR FACTOR =  .517
           3-HOUR FACTOR =  .856
           6-HOUR FACTOR =  .936
          24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =  13.376


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

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                    UNIT HYDROGRAPH DETERMINATION

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    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
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NUMBER	MEAN VALUES	ORDINATES(CFS)
1	1.061	83.528
2	3.558	196.680
3	7.389	301.767
4	13.423	475.210
5	21.185	611.325
6	29.574	660.779
7	38.728	720.916
8	49.747	867.864
9	57.593	617.962
10	63.663	478.136
11	68.526	382.971
12	72.385	303.960
13	75.464	242.505
14	77.983	198.362
15	80.174	172.566
16	82.026	145.843
17	83.604	124.342
18	84.999	109.854
19	86.169	92.159
20	87.183	79.836
21	88.142	75.555
22	89.001	67.682
23	89.818	64.323
24	90.535	56.465
25	91.220	53.939
26	91.848	49.462
27	92.375	41.545
28	92.832	35.933
29	93.268	34.351
30	93.682	32.615
31	94.021	26.738
32	94.309	22.650
33	94.596	22.647
34	94.883	22.558
35	95.154	21.387
36	95.422	21.078
37	95.690	21.066
38	95.944	20.056
39	96.160	16.969
40	96.371	16.669
41	96.583	16.664
42	96.787	16.043
43	96.978	15.094
44	97.170	15.076
45	97.361	15.066
46	97.535	13.737
47	97.670	10.603
48	97.804	10.540
49	97.936	10.402
50	98.053	9.235
51	98.167	8.953
52	98.281	8.965
53	98.391	8.712
54	98.492	7.952
55	98.592	7.895
56	98.693	7.896
57	98.796	8.125
58	98.903	8.418
59	99.010	8.424
60	99.116	8.366
61	99.173	4.515
62	99.207	2.634
63	99.240	2.633
64	99.273	2.634
65	99.307	2.634
66	99.340	2.633
67	99.374	2.645
68	99.407	2.622
69	99.441	2.634
70	99.474	2.634
71	99.508	2.633
72	99.541	2.645
73	99.574	2.622
74	99.608	2.633
75	99.641	2.599
76	99.662	1.644
77	99.677	1.219
78	99.693	1.253
79	99.709	1.242
80	99.725	1.231
81	99.740	1.231
82	99.757	1.323
83	99.773	1.231
84	99.788	1.230
85	99.804	1.231
86	99.819	1.231
87	99.835	1.231
88	99.851	1.231
89	99.866	1.230
90	99.882	1.231
91	99.898	1.231
92	99.913	1.230
93	99.929	1.231
94	99.944	1.231
95	99.960	1.231
96	99.976	1.231
97	99.991	1.230
98	100.000	.686

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.43
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.33

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 310.0505
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 722.2309

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	225.0	450.0	675.0	900.0
16.083	278.2076	567.22			V Q		
16.167	282.1141	567.22			V Q		
16.250	286.0206	567.22			V Q		
16.333	289.9270	567.22			V Q		
16.417	294.3403	640.80			V Q		
16.500	298.7535	640.80			V Q		
16.583	303.1667	640.80			V Q		
16.667	307.5800	640.80			V Q		
16.750	312.4230	703.21			V .Q		
16.833	317.2661	703.21			V .Q		
16.917	322.1091	703.21			V .Q		
17.000	326.9522	703.21			V .Q		
17.083	332.2464	768.72			V . Q		
17.167	337.5406	768.72			V . Q		
17.250	342.8348	768.72			V . Q		
17.333	348.1291	768.72			V. Q		
17.417	353.7138	810.90			V. Q		
17.500	359.2985	810.90			V. Q		
17.583	364.8832	810.90			V Q		
17.667	370.4679	810.90			V Q		
17.750	376.0889	816.17			V Q		
17.833	381.7099	816.17			V Q		
17.917	387.3309	816.17			V Q		
18.000	392.9519	816.17			V Q		
18.083	398.6598	828.79			. V Q		
18.167	404.3677	828.79			. V Q		
18.250	410.0756	828.79			. V Q		
18.333	415.7835	828.79			. V Q		
18.417	421.4985	829.82			. V Q		
18.500	427.2135	829.82			. V Q		
18.583	432.9286	829.82			. V Q		
18.667	438.6436	829.82			. V Q		
18.750	443.8033	749.18			. V . Q		
18.833	448.9629	749.18			. V . Q		
18.917	454.1226	749.18			. V . Q		
19.000	459.2823	749.18			. V . Q		

****
FLOW PROCESS FROM NODE 4.13 TO NODE 1.18 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 3 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 25.00 CHANNEL Z = 2.00
UPSTREAM ELEVATION = 3095.00
DOWNSTREAM ELEVATION = 2980.00
CHANNEL LENGTH(FT) = 10000.00 MANNING'S FACTOR = .030
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 1355.84
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 1048.73
CHANNEL NORMAL VELOCITY FOR Q = 1048.73 CFS = 10.10 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .856

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .668

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 3) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 3) (CFS)
16.083	928.4	812.5	812.5
16.167	928.4	817.4	817.4
16.250	928.4	831.7	831.7
16.333	928.4	896.3	896.3
16.417	1048.6	917.7	917.7
16.500	1048.6	924.8	924.8
16.583	1048.6	941.3	941.3
16.667	1048.6	1013.0	1013.0
16.750	1150.7	1036.8	1036.8
16.833	1150.7	1044.7	1044.7
16.917	1150.7	1059.3	1059.3
17.000	1150.7	1120.4	1120.4
17.083	1258.2	1140.7	1140.7
17.167	1258.2	1147.4	1147.4

17.250	1258.2	1162.2	1162.2
17.333	1258.2	1226.4	1226.4
17.417	1325.4	1247.7	1247.7
17.500	1325.4	1254.7	1254.7
17.583	1325.4	1264.9	1264.9
17.667	1325.4	1305.3	1305.3
17.750	1334.0	1318.7	1318.7
17.833	1334.0	1323.2	1323.2
17.917	1334.0	1325.7	1325.7
18.000	1334.0	1331.2	1331.2
18.083	1355.8	1333.1	1333.1
18.167	1355.8	1333.7	1333.7
18.250	1355.8	1336.5	1336.5
18.333	1355.8	1349.4	1349.4
18.417	1351.8	1353.7	1353.7
18.500	1351.8	1355.1	1355.1
18.583	1351.8	1355.1	1355.1
18.667	1351.8	1352.9	1352.9
18.750	1217.4	1352.2	1352.2
18.833	1217.4	1351.9	1351.9
18.917	1217.4	1336.1	1336.1
19.000	1217.4	1256.8	1256.8

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1176.145 AF
OUTFLOW VOLUME = 1176.144 AF
LOSS VOLUME = .000 AF

FLOW PROCESS FROM NODE 1.18 TO NODE 1.18 IS CODE = 7

>>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<

FLOW PROCESS FROM NODE 1.18 TO NODE 1.18 IS CODE = 6

>>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

FLOW PROCESS FROM NODE 1.00 TO NODE 1.18 IS CODE = 1

>>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 933.000 ACRES
BASEFLOW = .000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = .744 HOURS
VALLEY(DEVELOPED):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = .300
FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = .300
MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) = .100
VALLEY(UNDEVELOPED/DESERT):
"S"-CURVE PERCENTAGE(DECIMAL NOTATION) = .300
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = .199
LOW LOSS FRACTION = .239
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= .64
SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 1.10
SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.36
SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 1.97
SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 2.50
SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 4.95

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = .460
30-MINUTE FACTOR = .496
1-HOUR FACTOR = .517
3-HOUR FACTOR = .856
6-HOUR FACTOR = .936
24-HOUR FACTOR = .961

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 11.201

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.819	92.440
2	2.602	201.117
3	5.154	287.971
4	8.980	431.758
5	14.151	583.436

6	20.402	705.318
7	27.331	781.851
8	35.099	876.463
9	45.227	1142.817
10	54.043	994.765
11	60.484	726.808
12	65.741	593.110
13	70.115	493.606
14	73.664	400.355
15	76.569	327.826
16	78.979	271.978
17	81.006	228.619
18	82.863	209.558
19	84.404	173.854
20	85.729	149.568
21	86.945	137.210
22	87.961	114.624
23	88.848	100.054
24	89.635	88.786
25	90.403	86.677
26	91.084	76.853
27	91.745	74.558
28	92.334	66.451
29	92.889	62.715
30	93.415	59.287
31	93.908	55.643
32	94.313	45.709
33	94.656	38.737
34	94.991	37.803
35	95.296	34.391
36	95.592	33.382
37	95.814	24.994
38	96.008	21.993
39	96.203	21.992
40	96.398	21.986
41	96.588	21.385
42	96.767	20.258
43	96.946	20.207
44	97.126	20.238
45	97.302	19.863
46	97.442	15.813
47	97.575	14.964
48	97.707	14.978
49	97.840	14.960
50	97.966	14.261
51	98.083	13.214
52	98.200	13.214
53	98.317	13.182
54	98.433	13.028
55	98.535	11.499
56	98.634	11.171
57	98.733	11.188
58	98.832	11.179
59	98.908	8.628
60	98.969	6.835
61	99.029	6.812
62	99.090	6.835
63	99.150	6.757
64	99.206	6.382
65	99.262	6.312
66	99.318	6.320
67	99.374	6.320
68	99.431	6.450
69	99.490	6.572
70	99.548	6.568
71	99.606	6.576
72	99.660	6.035
73	99.672	1.405
74	99.683	1.259
75	99.694	1.264
76	99.706	1.259
77	99.717	1.266
78	99.728	1.267
79	99.739	1.259
80	99.750	1.267
81	99.762	1.267
82	99.773	1.259
83	99.784	1.259
84	99.795	1.267
85	99.807	1.267
86	99.818	1.267
87	99.829	1.259
88	99.840	1.259
89	99.851	1.267
90	99.861	1.093
91	99.866	.614
92	99.872	.606
93	99.877	.575
94	99.882	.606
95	99.887	.590
96	99.893	.598
97	99.898	.591
98	99.904	.653
99	99.909	.590
100	99.914	.591
101	99.920	.591
102	99.925	.591
103	99.930	.590
104	99.935	.591
105	99.940	.591

106	99.946	.590
107	99.951	.591
108	99.956	.591
109	99.961	.590
110	99.967	.591
111	99.972	.591
112	99.977	.591
113	99.982	.590
114	99.988	.591
115	99.993	.591
116	99.998	.590
117	100.000	.230

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = 1.08
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.68

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 84.0272
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 285.6778

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

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

================================================================================
                HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

--------------------------------------------------------------------------------
 TIME(HRS) VOLUME(AF)   Q(CFS) 0.      175.0     350.0     525.0     700.0
--------------------------------------------------------------------------------
  16.083    152.1452    324.42  .        .       Q .V        .         .
  16.167    154.5649    351.34  .        .         QV        .         .
  16.250    157.1840    380.30  .        .         .QV       .         .
  16.333    160.1081    424.58  .        .         . V Q     .         .
  16.417    163.3565    471.66  .        .         . V   Q   .         .
  16.500    166.8797    511.58  .        .         .  V      Q.        .
  16.583    170.6114    541.84  .        .         .  V       Q        .
  16.667    174.5784    576.02  .        .         .   V        . Q     .
  16.750    178.9702    637.69  .        .         .    V       .   Q   .
  16.833    183.0653    594.60  .        .         .    V       .  Q    .
  16.917    186.6676    523.06  .        .         .     V   Q.        .
  17.000    190.0113    485.49  .        .         .     VQ  .         .
  17.083    193.1916    461.78  .        .         .     QV  .         .
  17.167    196.2081    437.99  .        .         .    Q V  .         .
  17.250    199.0675    415.19  .        .         .  Q  V   .         .
  17.333    201.7822    394.17  .        .         . Q    V  .         .
  17.417    204.3587    374.11  .        .         .Q     V  .         .
  17.500    206.8204    357.43  .        .         Q      V  .         .
  17.583    209.1320    335.64  .        .         Q.     V. .         .
  17.667    211.3035    315.30  .        .       Q .      V. .         .
  17.750    213.3305    294.32  .        .     Q   .      V. .         .
  17.833    215.2099    272.89  .        .    Q    .       V .         .
  17.917    216.9758    256.42  .        .   Q     .       V .         .
  18.000    218.6470    242.66  .        .  Q      .       V .         .
  18.083    220.2485    232.53  .        .  Q      .       V .         .
  18.167    221.7760    221.80  .        . Q       .       .V.         .
  18.250    223.2481    213.74  .        . Q       .       .V.         .
  18.333    224.6618    205.26  .        .Q        .       .V.         .
  18.417    226.0311    198.83  .        .Q        .       .V.         .
  18.500    227.3591    192.83  .        .Q        .       .V.         .
  18.583    228.6488    187.25  .        Q         .       . V         .
  18.667    229.8932    180.69  .        Q         .       . V         .
  18.750    231.1021    175.53  .        Q         .       . V         .
  18.833    232.2873    172.09  .       Q.         .       . V         .
  18.917    233.4449    168.08  .       Q.         .       . V         .
  19.000    234.5775    164.47  .       Q.         .       . V         .

********************************************************************************
  FLOW PROCESS FROM NODE     1.00 TO NODE     1.18 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
================================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =     295.000 ACRES
         BASEFLOW =     .000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =     .904 HOURS
         VALLEY(DEVELOPED):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .300
         FOOTHILL "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .300
         MOUNTAIN "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .100
         VALLEY(UNDEVELOPED/DESERT):
                  "S"-CURVE PERCENTAGE(DECIMAL NOTATION) =   .300
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .140
         LOW LOSS FRACTION =  .183
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .64
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  1.10
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.36
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.97
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.50
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.95

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .460
         30-MINUTE FACTOR =  .496
          1-HOUR FACTOR =  .517
          3-HOUR FACTOR =  .856
          6-HOUR FACTOR =  .936
         24-HOUR FACTOR =  .961

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   9.218


         RUNOFF HYDROGRAPH LISTING LIMITS:
         MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 16.00
         MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

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

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    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
```

NUMBER	MEAN VALUES	ORDINATES(CFS)
1	.674	24.055
2	2.056	49.306
3	3.900	65.775
4	6.392	88.908
5	9.947	126.844
6	14.274	154.346
7	19.391	182.559
8	25.033	201.287
9	31.015	213.414
10	37.872	244.652
11	46.840	319.949
12	53.803	248.415
13	59.231	193.639
14	63.848	164.740
15	67.763	139.665
16	71.083	118.449
17	73.928	101.482
18	76.316	85.196
19	78.368	73.208
20	80.127	62.783
21	81.719	56.785
22	83.195	52.668
23	84.431	44.094
24	85.524	38.998
25	86.558	36.879
26	87.469	32.513
27	88.246	27.691
28	88.957	25.397
29	89.600	22.929
30	90.241	22.851
31	90.820	20.660
32	91.366	19.477
33	91.902	19.147
34	92.373	16.785
35	92.830	16.319
36	93.273	15.809
37	93.681	14.539
38	94.064	13.680
39	94.379	11.228
40	94.659	9.999
41	94.938	9.937
42	95.193	9.090
43	95.440	8.810
44	95.671	8.246
45	95.838	5.960
46	95.998	5.721
47	96.158	5.720
48	96.319	5.726
49	96.479	5.716
50	96.631	5.413
51	96.778	5.260
52	96.926	5.269
53	97.073	5.257
54	97.221	5.262
55	97.357	4.844
56	97.472	4.125
57	97.587	4.102
58	97.702	4.094
59	97.817	4.100
60	97.931	4.070
61	98.036	3.746
62	98.138	3.633
63	98.240	3.642
64	98.342	3.634
65	98.444	3.636
66	98.540	3.421
67	98.627	3.114
68	98.691	2.290
69	98.754	2.237
70	98.817	2.239
71	98.878	2.177
72	98.929	1.841
73	98.979	1.772
74	99.029	1.778
75	99.078	1.775
76	99.128	1.777
77	99.176	1.701
78	99.222	1.640
79	99.268	1.643
80	99.314	1.642
81	99.360	1.642
82	99.406	1.654
83	99.454	1.706
84	99.502	1.707
85	99.550	1.708
86	99.598	1.707
87	99.645	1.699
88	99.667	.758
89	99.676	.329
90	99.685	.330
91	99.694	.328
92	99.703	.330
93	99.713	.328
94	99.722	.331
95	99.731	.327
96	99.740	.329
97	99.750	.330
98	99.759	.327

99	99.768	.330
100	99.777	.333
101	99.786	.323
102	99.796	.333
103	99.805	.327
104	99.814	.333
105	99.823	.323
106	99.833	.333
107	99.842	.330
108	99.851	.327
109	99.859	.305
110	99.864	.175
111	99.869	.154
112	99.873	.157
113	99.877	.154
114	99.882	.154
115	99.886	.154
116	99.890	.154
117	99.895	.154
118	99.899	.157
119	99.904	.173
120	99.908	.157
121	99.913	.157
122	99.917	.157
123	99.922	.157
124	99.926	.157
125	99.930	.157
126	99.935	.157
127	99.939	.157
128	99.944	.157
129	99.948	.157
130	99.952	.157
131	99.957	.157
132	99.961	.157
133	99.966	.157
134	99.970	.157
135	99.974	.157
136	99.979	.157
137	99.983	.157
138	99.988	.157
139	99.992	.157
140	99.997	.157
141	100.000	.125

TOTAL STORM RAINFALL(INCHES) = 4.76
TOTAL SOIL-LOSS(INCHES) = .83
TOTAL EFFECTIVE RAINFALL(INCHES) = 3.93

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 20.2922
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 96.5995

118-290

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 50.0 100.0 150.0 200.0
16.083	50.0064	110.30	
16.167	50.8095	116.62	
16.250	51.6339	119.69	
16.333	52.5024	126.11	
16.417	53.4482	137.34	
16.500	54.4580	146.61	
16.583	55.5317	155.91	
16.667	56.6543	163.00	
16.750	57.8227	169.66	
16.833	59.0654	180.43	
16.917	60.4242	197.30	
17.000	61.6519	178.26	
17.083	62.7722	162.67	
17.167	63.8310	153.74	
17.250	64.8480	147.67	
17.333	65.8212	141.31	
17.417	66.7494	134.77	
17.500	67.6305	127.94	
17.583	68.4688	121.72	
17.667	69.2653	115.64	
17.750	70.0254	110.38	
17.833	70.7480	104.92	
17.917	71.4194	97.49	
18.000	72.0513	91.75	
18.083	72.6531	87.39	
18.167	73.2244	82.95	
18.250	73.7668	78.75	
18.333	74.2868	75.50	
18.417	74.7868	72.61	
18.500	75.2724	70.51	
18.583	75.7417	68.15	
18.667	76.1978	66.22	
18.750	76.6425	64.57	
18.833	77.0739	62.63	
18.917	77.4964	61.35	
19.000	77.9100	60.06	

****
FLOW PROCESS FROM NODE 1.18 TO NODE 1.18 IS CODE = 11

>>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

STREAM HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 2400.0 4800.0 7200.0 9600.0
16.083	3192.0920	6102.08	
16.167	3235.0770	6241.48	
16.250	3281.6460	6761.85	
16.333	3329.6560	6971.05	
16.417	3378.3440	7069.39	
16.500	3428.0900	7223.12	
16.583	3481.3210	7729.16	
16.667	3535.9440	7931.35	
16.750	3591.3240	8041.15	
16.833	3647.1640	8107.86	
16.917	3705.6240	8488.44	
17.000	3764.6890	8576.29	
17.083	3823.7370	8573.77	
17.167	3883.2340	8638.93	
17.250	3945.5390	9046.70	
17.333	4008.6730	9167.07	
17.417	4071.8850	9178.32	
17.500	4135.2360	9198.60	
17.583	4199.5730	9341.71	
17.667	4264.2260	9387.58	
17.750	4328.8340	9381.05	
17.833	4393.4250	9378.59	
17.917	4458.4880	9447.19	
18.000	4523.5790	9451.08	
18.083	4588.6060	9441.97	
18.167	4653.6490	9444.29	
18.250	4719.1620	9512.45	
18.333	4784.7890	9529.06	
18.417	4850.4020	9527.08	
18.500	4915.3600	9431.82	
18.583	4977.3190	8996.48	
18.667	5038.6220	8901.09	
18.750	5099.7560	8876.75	
18.833	5160.0880	8760.24	
18.917	5216.7200	8222.84	
19.000	5272.0660	8036.29	

END OF FLOOD ROUTING ANALYSIS

HYD. WATERSHED
DATE 7/13/92

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

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 ************************* DESCRIPTION OF STUDY *************************
*                     WATERSHED 50                                       *
*  HYDROGRAPH AT NODE 50.06 ROUTED TO NODE 50.07                         *
*                                                                        *
 **************************************************************************

  FILE NAME: HYD5006.INP
  TIME/DATE OF STUDY: 10:38   7/13/1992


**************************************************************************
  FLOW PROCESS FROM NODE    50.00 TO NODE    50.06 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =     813.700 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.123 HOURS
        VALLEY(DEVELOPED) S-GRAPH SELECTED
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .109
        LOW LOSS FRACTION =  .227
        *HYDROGRAPH MODEL #2 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .57
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=   .97
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.20
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.54
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.80
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  3.00

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .865
         30-MINUTE FACTOR =  .865
          1-HOUR FACTOR =  .865
          3-HOUR FACTOR =  .980
          6-HOUR FACTOR =  .990
         24-HOUR FACTOR =  .994

        UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.841
```

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.848	41.728
2	2.845	98.238
3	6.962	202.612
4	14.448	368.319
5	23.412	441.031
6	33.644	503.492
7	46.366	625.942
8	59.047	623.962
9	69.936	535.782
10	78.571	424.857
11	84.822	307.567
12	89.251	217.911
13	92.414	155.620
14	94.838	119.271
15	96.442	78.943
16	97.599	56.917
17	98.185	28.857
18	98.463	13.686
19	98.742	13.695
20	99.020	13.689
21	99.298	13.689
22	99.576	13.689
23	99.855	13.689
24	100.000	7.158

TOTAL STORM RAINFALL(INCHES) = 2.98
TOTAL SOIL-LOSS(INCHES) = .54
TOTAL EFFECTIVE RAINFALL(INCHES) = 2.44

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 36.6809
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 165.4381

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 175.0 350.0 525.0 700.0
14.083	45.5665	57.64	. Q .V . . .
14.167	45.9635	57.64	. Q .V . . .
14.250	46.3783	60.24	. Q .V . . .
14.333	46.7932	60.24	. Q .V . . .
14.417	47.2343	64.04	. Q .V . . .
14.500	47.6754	64.04	. Q .V . . .
14.583	48.1537	69.45	. Q .V . . .
14.667	48.6320	69.45	. Q .V . . .
14.750	49.1556	76.02	. Q .V . . .
14.833	49.6791	76.02	. Q . V . . .
14.917	50.2558	83.74	. Q . V . . .
15.000	50.8325	83.74	. Q . V . . .
15.083	51.4738	93.12	. Q . V . . .
15.167	52.1151	93.12	. Q . V . . .
15.250	52.8286	103.61	. Q . V . . .
15.333	53.5421	103.61	. Q . V . . .
15.417	54.3328	114.81	. Q . V . . .
15.500	55.1235	114.81	. Q . V . . .
15.583	55.9987	127.08	. Q . V . . .
15.667	56.8739	127.08	. Q . V . . .
15.750	57.8471	141.31	. Q . V . . .
15.833	58.8203	141.31	. Q . V . . .
15.917	59.9358	161.96	. Q. V . . .
16.000	61.0512	161.96	. Q. V . . .
16.083	62.4766	206.97	. .Q V . . .
16.167	63.9020	206.97	. .Q V . . .
16.250	65.7363	266.35	. . Q . . .
16.333	67.5707	266.35	. . QV . . .
16.417	69.9998	352.71	. . V Q . . .
16.500	72.4290	352.71	. . V Q . . .
16.583	75.5687	455.89	. . V . Q . . .
16.667	78.7085	455.89	. . V. Q . . .
16.750	82.2238	510.42	. . V. Q. . .
16.833	85.7391	510.42	. . V Q. . .
16.917	89.5818	557.96	. . .V .Q . .
17.000	93.4245	557.96	. . . V .Q . .
17.083	97.6381	611.81	. . . V . Q . .
17.167	101.8517	611.81	. . . V . Q . .
17.250	105.9135	589.77	. . . V . Q . .
17.333	109.9753	589.77	. . . V . Q . .
17.417	113.5393	517.50	. . . V Q. . .
17.500	117.1034	517.50	. . . VQ. . .
17.583	120.0614	429.50	. . . Q V. . .
17.667	123.0193	429.50	. . . Q V. . .
17.750	125.3657	340.69	. . Q. V . .
17.833	127.7120	340.69	. . Q. V . .
17.917	129.5644	268.97	. . Q . .V . .
18.000	131.4168	268.97	. . Q . .V . .

18.083	132.8943	214.53	.			.	Q	.			.	V	.	
18.167	134.3718	214.53	.			.	Q	.			.	V	.	
18.250	135.5768	174.97	.		Q	.		.			.	V	.	
18.333	136.7818	174.97	.		Q	.		.			.	V	.	
18.417	137.7374	138.75	.		Q	.		.			.	V	.	
18.500	138.6929	138.75	.		Q	.		.			.	V	.	
18.583	139.4801	114.30	.		Q	.		.			.	V	.	
18.667	140.2673	114.30	.		Q	.		.			.	V	.	
18.750	140.8979	91.57	.		Q	.		.			.	V	.	
18.833	141.5286	91.57	.		Q	.		.			.	V	.	
18.917	142.0725	78.97	.	Q		.		.			.	V	.	
19.000	142.6164	78.97	.	Q		.		.			.	V	.	

****

FLOW PROCESS FROM NODE 50.06 TO NODE 50.07 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 40.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 2940.00
DOWNSTREAM ELEVATION = 2900.00
CHANNEL LENGTH(FT) = 7000.00 MANNING'S FACTOR = .032
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 611.81
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 485.14
CHANNEL NORMAL VELOCITY FOR Q = 485.14 CFS = 5.16 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .752

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .522

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	57.6	54.8	54.8
14.167	57.6	55.1	55.1
14.250	60.2	55.5	55.5
14.333	60.2	56.2	56.2
14.417	64.0	57.0	57.0
14.500	64.0	58.1	58.1
14.583	69.5	59.2	59.2
14.667	69.5	61.0	61.0
14.750	76.0	62.6	62.6
14.833	76.0	65.0	65.0

14.917	83.7	67.3	67.3
15.000	83.7	70.5	70.5
15.083	93.1	73.4	73.4
15.167	93.1	77.2	77.2
15.250	103.6	80.6	80.6
15.333	103.6	85.2	85.2
15.417	114.8	89.3	89.3
15.500	114.8	94.6	94.6
15.583	127.1	99.3	99.3
15.667	127.1	105.1	105.1
15.750	141.3	110.2	110.2
15.833	141.3	116.4	116.4
15.917	162.0	122.0	122.0
16.000	162.0	129.1	129.1
16.083	207.0	135.5	135.5
16.167	207.0	145.0	145.0
16.250	266.3	153.9	153.9
16.333	266.3	172.2	172.2
16.417	352.7	190.4	190.4
16.500	352.7	217.7	217.7
16.583	455.9	243.1	243.1
16.667	455.9	282.4	282.4
16.750	510.4	319.1	319.1
16.833	510.4	369.1	369.1
16.917	558.0	414.4	414.4
17.000	558.0	453.2	453.2
17.083	611.8	483.1	483.1
17.167	611.8	512.3	512.3
17.250	589.8	536.2	536.2
17.333	589.8	564.5	564.5
17.417	517.5	589.2	589.2
17.500	517.5	594.1	594.1
17.583	429.5	591.8	591.8
17.667	429.5	568.1	568.1
17.750	340.7	541.6	541.6
17.833	340.7	501.4	501.4
17.917	269.0	463.8	463.8
18.000	269.0	418.0	418.0
18.083	214.5	377.6	377.6
18.167	214.5	335.8	335.8
18.250	175.0	300.9	300.9
18.333	175.0	267.1	267.1
18.417	138.7	239.6	239.6
18.500	138.7	214.1	214.1
18.583	114.3	193.7	193.7
18.667	114.3	172.5	172.5
18.750	91.6	154.9	154.9
18.833	91.6	138.8	138.8
18.917	79.0	126.0	126.0
19.000	79.0	112.7	112.7

```
================================================================================
  PROCESS SUMMARY OF STORAGE:
    INFLOW  VOLUME =     165.438 AF
    OUTFLOW VOLUME =     165.438 AF
    LOSS    VOLUME =        .000 AF
================================================================================

  END OF FLOOD ROUTING ANALYSIS
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**************************************************************************

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                        Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                WATERSHED 50                                            *
*  HYDROGRAPH AT NODE 50.07 ROUTED TO NODE 50.08                         *
*                                                                        *
 **************************************************************************

  FILE NAME: HYD5007.INP
  TIME/DATE OF STUDY: 10:53   7/13/1992


**************************************************************************
  FLOW PROCESS FROM NODE    50.00 TO NODE    50.07 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    1609.000 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.499 HOURS
        VALLEY(DEVELOPED) S-GRAPH SELECTED
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =    .073
        LOW LOSS FRACTION =  .175
        *HYDROGRAPH MODEL #2 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .57
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=   .97
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.20
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.54
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.80
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  3.00

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .865
         30-MINUTE FACTOR =  .865
          1-HOUR FACTOR =  .865
          3-HOUR FACTOR =  .980
          6-HOUR FACTOR =  .990
         24-HOUR FACTOR =  .994

        UNIT HYDROGRAPH TIME UNIT =  10.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  11.119
```

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.635	61.815
2	1.966	129.485
3	3.915	189.635
4	7.660	364.308
5	13.319	550.644
6	19.852	635.563
7	26.991	694.573
8	34.982	777.557
9	44.507	926.733
10	54.501	972.295
11	63.358	861.725
12	71.042	747.626
13	77.640	641.955
14	82.605	483.050
15	86.721	400.444
16	89.648	284.866
17	92.013	230.093
18	94.041	197.240
19	95.510	142.959
20	96.573	103.469
21	97.446	84.849
22	98.070	60.750
23	98.284	20.876
24	98.493	20.262
25	98.701	20.304
26	98.910	20.288
27	99.118	20.253
28	99.326	20.253
29	99.534	20.253
30	99.743	20.253
31	99.951	20.253
32	100.000	4.793

TOTAL STORM RAINFALL(INCHES) = 2.98
TOTAL SOIL-LOSS(INCHES) = .41
TOTAL EFFECTIVE RAINFALL(INCHES) = 2.57

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 55.0979
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 344.5606

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 275.0 550.0 825.0 1100.0
14.083	92.2852	119.54	. Q V . . .
14.167	93.1085	119.54	. Q V . . .
14.250	93.9519	122.45	. Q V . . .
14.333	94.7952	122.45	. Q V . . .
14.417	95.6678	126.70	. Q .V . . .
14.500	96.5404	126.70	. Q .V . . .
14.583	97.4591	133.40	. Q .V . . .
14.667	98.3778	133.40	. Q .V . . .
14.750	99.3590	142.47	. Q .V . . .
14.833	100.3401	142.47	. Q .V . . .
14.917	101.3959	153.30	. Q .V . . .
15.000	102.4517	153.30	. Q .V . . .
15.083	103.5955	166.08	. Q . V . . .
15.167	104.7393	166.08	. Q . V . . .
15.250	105.9877	181.27	. Q . V . . .
15.333	107.2361	181.27	. Q . V . . .
15.417	108.6096	199.43	. Q . V . . .
15.500	109.9831	199.43	. Q . V . . .
15.583	111.5030	220.69	. Q . V . . .
15.667	113.0229	220.69	. Q . V . . .
15.750	114.7155	245.77	. Q . V . . .
15.833	116.4081	245.77	. Q . V . . .
15.917	118.3370	280.08	. Q V . . .
16.000	120.2660	280.08	. Q V . . .
16.083	122.6565	347.10	. . Q V . . .
16.167	125.0470	347.10	. . Q V . . .
16.250	127.9423	420.40	. . VQ . . .
16.333	130.8376	420.40	. . Q . . .
16.417	134.3061	503.63	. . V Q . . .
16.500	137.7747	503.63	. . V Q . . .
16.583	142.1762	639.10	. . V . Q . .
16.667	146.5778	639.10	. . V . Q . .
16.750	151.8472	765.12	. . V . Q . .
16.833	157.1166	765.12	. . V . Q . .
16.917	162.8691	835.26	. . V . Q .
17.000	168.6216	835.26	. . V. Q .
17.083	174.7468	889.39	. . V . Q .
17.167	180.8721	889.39	. . V . Q .
17.250	187.4261	951.65	. . .V . Q .
17.333	193.9801	951.65	. . . V . Q .
17.417	201.0182	1021.93	. . . V . Q .
17.500	208.0564	1021.93	. . . V . Q .
17.583	215.0495	1015.40	. . . V . Q .
17.667	222.0426	1015.40	. . . V . Q .
17.750	228.4035	923.60	. . . V . Q .
17.833	234.7645	923.60	. . . V . Q .
17.917	240.4341	823.23	. . . V Q. .
18.000	246.1037	823.23	. . . VQ. .

18.083	251.0574	719.28	.	.	.	Q	V.	.
18.167	256.0112	719.28	.	.	.	Q	V.	.
18.250	260.1245	597.26	.	.	.Q		V	.
18.333	264.2379	597.26	.	.	.Q		V	.
18.417	267.7487	509.77	.	.	Q .		.V	.
18.500	271.2595	509.77	.	.	Q .		.V	.
18.583	274.1321	417.10	.	. Q	.		.V	.
18.667	277.0047	417.10	.	. Q	.		. V	.
18.750	279.4837	359.95	.	. Q	.		. V	.
18.833	281.9627	359.95	.	. Q	.		. V	.
18.917	284.1353	315.46	.	.Q	.		. V	.
19.000	286.3079	315.46	.	.Q	.		. V	.

****

FLOW PROCESS FROM NODE 50.07 TO NODE 50.08 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 40.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 2900.00
DOWNSTREAM ELEVATION = 2886.00
CHANNEL LENGTH(FT) = 3000.00 MANNING'S FACTOR = .032
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 1021.93
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 834.66
CHANNEL NORMAL VELOCITY FOR Q = 834.66 CFS = 5.79 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .773

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .709

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	119.5	118.4	118.4
14.167	119.5	118.9	118.9
14.250	122.5	119.4	119.4
14.333	122.5	120.9	120.9
14.417	126.7	122.0	122.0
14.500	126.7	124.3	124.3
14.583	133.4	126.0	126.0
14.667	133.4	129.7	129.7
14.750	142.5	132.3	132.3
14.833	142.5	137.3	137.3

14.917	153.3	141.0	141.0
15.000	153.3	147.1	147.1
15.083	166.1	151.5	151.5
15.167	166.1	158.8	158.8
15.250	181.3	164.0	164.0
15.333	181.3	172.6	172.6
15.417	199.4	178.7	178.7
15.500	199.4	189.1	189.1
15.583	220.7	196.4	196.4
15.667	220.7	208.6	208.6
15.750	245.8	217.2	217.2
15.833	245.8	231.5	231.5
15.917	280.1	241.6	241.6
16.000	280.1	260.7	260.7
16.083	347.1	274.4	274.4
16.167	347.1	310.0	310.0
16.250	420.4	336.3	336.3
16.333	420.4	378.5	378.5
16.417	503.6	408.2	408.2
16.500	503.6	456.0	456.0
16.583	639.1	489.8	489.8
16.667	639.1	563.4	563.4
16.750	765.1	617.1	617.1
16.833	765.1	692.0	692.0
16.917	835.3	743.8	743.8
17.000	835.3	791.9	791.9
17.083	889.4	822.6	822.6
17.167	889.4	857.1	857.1
17.250	951.6	880.0	880.0
17.333	951.6	916.0	916.0
17.417	1021.9	941.3	941.3
17.500	1021.9	981.7	981.7
17.583	1015.4	1010.2	1010.2
17.667	1015.4	1015.4	1015.4
17.750	923.6	1015.4	1015.4
17.833	923.6	972.2	972.2
17.917	823.2	937.8	937.8
18.000	823.2	880.5	880.5
18.083	719.3	839.9	839.9
18.167	719.3	779.1	779.1
18.250	597.3	736.7	736.7
18.333	597.3	666.9	666.9
18.417	509.8	617.5	617.5
18.500	509.8	562.0	562.0
18.583	417.1	525.0	525.0
18.667	417.1	470.6	470.6
18.750	360.0	432.7	432.7
18.833	360.0	394.7	394.7
18.917	315.5	370.1	370.1
19.000	315.5	342.0	342.0

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 344.560 AF
OUTFLOW VOLUME = 344.560 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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                        Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                  WATERSHED 50                                          *
*  HYDROGRAPH AT NODE 50.08 ROUTED TO NODE 50.09                         *
*                                                                        *
 **************************************************************************

  FILE NAME: HYD5008.INP
  TIME/DATE OF STUDY: 11: 5   7/13/1992


**************************************************************************
  FLOW PROCESS FROM NODE    50.00 TO NODE    50.08 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    3019.500 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.643 HOURS
        VALLEY(DEVELOPED) S-GRAPH SELECTED
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .076
        LOW LOSS FRACTION =  .178
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .57
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=   .97
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.20
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.54
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.80
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  3.00

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .865
         30-MINUTE FACTOR =  .865
          1-HOUR FACTOR =  .865
          3-HOUR FACTOR =  .980
          6-HOUR FACTOR =  .990
         24-HOUR FACTOR =  .994

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.216
```

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.869	105.837
2	2.946	252.760
3	7.366	537.975
4	15.189	952.247
5	24.487	1131.818
6	35.217	1306.044
7	48.626	1632.212
8	61.281	1540.425
9	72.032	1308.683
10	80.166	990.070
11	86.197	734.139
12	90.227	490.526
13	93.289	372.766
14	95.462	264.431
15	96.873	171.821
16	97.926	128.182
17	98.301	45.655
18	98.587	34.718
19	98.872	34.702
20	99.157	34.748
21	99.442	34.702
22	99.727	34.702
23	100.000	33.197

TOTAL STORM RAINFALL(INCHES) = 2.98
TOTAL SOIL-LOSS(INCHES) = .42
TOTAL EFFECTIVE RAINFALL(INCHES) = 2.56

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 105.3426
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 644.6700

24-HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	450.0	900.0	1350.0	1800.0
14.083	169.7711	225.16	. Q	V	.	.	.
14.167	171.3218	225.16	. Q	V	.	.	.
14.250	172.8724	225.16	. Q	V	.	.	.
14.333	174.4752	232.72	. Q	V	.	.	.
14.417	176.0780	232.72	. Q	V	.	.	.
14.500	177.6807	232.72	. Q	V	.	.	.
14.583	179.3852	247.49	. Q	.V	.	.	.
14.667	181.0897	247.49	. Q	.V	.	.	.
14.750	182.7942	247.49	. Q	.V	.	.	.
14.833	184.6649	271.63	. Q	.V	.	.	.
14.917	186.5357	271.63	. Q	.V	.	.	.
15.000	188.4064	271.63	. Q	.V	.	.	.
15.083	190.4938	303.09	. Q	.V	.	.	.
15.167	192.5811	303.09	. Q	.V	.	.	.
15.250	194.6685	303.09	. Q	. V	.	.	.
15.333	197.0324	343.24	. Q	. V	.	.	.
15.417	199.3963	343.24	. Q	. V	.	.	.
15.500	201.7602	343.24	. Q	. V	.	.	.
15.583	204.4962	397.27	. Q	. V	.	.	.
15.667	207.2322	397.27	. Q	. V	.	.	.
15.750	209.9682	397.27	. Q	. V	.	.	.
15.833	213.2411	475.22	. Q	V	.	.	.
15.917	216.5139	475.22	. Q	V	.	.	.
16.000	219.7868	475.22	. Q	V	.	.	.
16.083	224.0591	620.34	.	Q	.	.	.
16.167	228.3313	620.34	.	QV	.	.	.
16.250	232.6036	620.34	.	QV	.	.	.
16.333	238.1788	809.51	.	V Q	.	.	.
16.417	243.7539	809.51	.	V Q	.	.	.
16.500	249.3291	809.51	.	V Q	.	.	.
16.583	256.7513	1077.71	.	V	. Q	.	.
16.667	264.1736	1077.71	.	V	. Q	.	.
16.750	271.5959	1077.71	.	V	. Q	.	.
16.833	281.0028	1365.88	.	V	.	Q	.
16.917	290.4097	1365.88	.	V	.	Q	.
17.000	299.8167	1365.88	.	V	.	Q	.
17.083	310.2907	1520.84	.	V.	.	Q	.
17.167	320.7648	1520.84	.	V.	.	Q	.
17.250	331.2389	1520.84	.	V	.	Q	.
17.333	342.6810	1661.39	.	.V	.	Q	.
17.417	354.1231	1661.39	.	.V	.	Q	.
17.500	365.5652	1661.39	.	. V	.	Q	.
17.583	377.8860	1788.98	.	. V	.	Q.	
17.667	390.2068	1788.98	.	. V	.	Q.	
17.750	402.5276	1788.98	.	. V	.	Q.	
17.833	413.9681	1661.15	.	. V	.	Q	.
17.917	425.4085	1661.15	.	. V	.	Q	.
18.000	436.8489	1661.15	.	. V	.	Q	.

18.083	446.7125	1432.19	.	.	.	V	.Q	.
18.167	456.5760	1432.19	.	.	.	V	.Q	.
18.250	466.4396	1432.19	.	.	.	V	.Q	.
18.333	474.4281	1159.93	.	.	.	Q	V.	.
18.417	482.4167	1159.93	.	.	.	Q	V.	.
18.500	490.4052	1159.93	.	.	.	Q	V	.
18.583	496.7539	921.84	.	.	Q		V	.
18.667	503.1027	921.84	.	.	Q		V	.
18.750	509.4514	921.84	.	.	Q		V	.
18.833	514.3951	717.82	.	.	Q	.	.V	.
18.917	519.3387	717.82	.	.	Q	.	. V	.
19.000	524.2824	717.82	.	.	Q	.	. V	.

****
FLOW PROCESS FROM NODE 50.08 TO NODE 50.09 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 50.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 2886.00
DOWNSTREAM ELEVATION = 2860.00
CHANNEL LENGTH(FT) = 5200.00 MANNING'S FACTOR = .032
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 1788.98
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 1398.88
CHANNEL NORMAL VELOCITY FOR Q = 1398.88 CFS = 6.70 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .798

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .650

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	225.2	223.5	223.5
14.167	225.2	223.3	223.3
14.250	225.2	224.4	224.4
14.333	232.7	224.9	224.9
14.417	232.7	225.1	225.1
14.500	232.7	229.7	229.7
14.583	247.5	231.7	231.7
14.667	247.5	232.4	232.4
14.750	247.5	241.6	241.6
14.833	271.6	245.4	245.4

14.917	271.6	246.8	246.8
15.000	271.6	261.9	261.9
15.083	303.1	268.2	268.2
15.167	303.1	270.4	270.4
15.250	303.1	290.4	290.4
15.333	343.2	298.6	298.6
15.417	343.2	301.5	301.5
15.500	343.2	327.0	327.0
15.583	397.3	337.6	337.6
15.667	397.3	341.2	341.2
15.750	397.3	375.5	375.5
15.833	475.2	389.6	389.6
15.917	475.2	394.6	394.6
16.000	475.2	443.8	443.8
16.083	620.3	464.2	464.2
16.167	620.3	471.4	471.4
16.250	620.3	562.3	562.3
16.333	809.5	600.0	600.0
16.417	809.5	613.2	613.2
16.500	809.5	733.1	733.1
16.583	1077.7	782.8	782.8
16.667	1077.7	800.1	800.1
16.750	1077.7	969.7	969.7
16.833	1365.9	1039.9	1039.9
16.917	1365.9	1064.5	1064.5
17.000	1365.9	1248.7	1248.7
17.083	1520.8	1324.8	1324.8
17.167	1520.8	1351.5	1351.5
17.250	1520.8	1455.3	1455.3
17.333	1661.4	1497.9	1497.9
17.417	1661.4	1512.8	1512.8
17.500	1661.4	1603.7	1603.7
17.583	1789.0	1641.2	1641.2
17.667	1789.0	1654.3	1654.3
17.750	1789.0	1736.7	1736.7
17.833	1661.1	1770.7	1770.7
17.917	1661.1	1782.6	1782.6
18.000	1661.1	1708.8	1708.8
18.083	1432.2	1677.9	1677.9
18.167	1432.2	1667.0	1667.0
18.250	1432.2	1523.7	1523.7
18.333	1159.9	1464.2	1464.2
18.417	1159.9	1443.4	1443.4
18.500	1159.9	1270.2	1270.2
18.583	921.8	1198.6	1198.6
18.667	921.8	1173.5	1173.5
18.750	921.8	1019.6	1019.6
18.833	717.8	956.1	956.1
18.917	717.8	933.8	933.8
19.000	717.8	801.7	801.7

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 644.670 AF

OUTFLOW VOLUME = 644.670 AF

LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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                          Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*                  WATERSHED 50                                        *
*  HYDROGRAPH AT NODE 50.09 ROUTED TO NODE 50.10                       *
*                                                                      *
 **************************************************************************

  FILE NAME: HYD5009.INP
  TIME/DATE OF STUDY: 11:19   7/13/1992


**************************************************************************
  FLOW PROCESS FROM NODE     50.00 TO NODE     50.09 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    3522.000 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    1.858 HOURS
        VALLEY(DEVELOPED) S-GRAPH SELECTED
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .069
        LOW LOSS FRACTION =  .169
        *HYDROGRAPH MODEL #3 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .57
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=   .97
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.20
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.54
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.80
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  3.00

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .865
         30-MINUTE FACTOR =  .865
          1-HOUR FACTOR =  .865
          3-HOUR FACTOR =  .980
          6-HOUR FACTOR =  .990
         24-HOUR FACTOR =  .994

        UNIT HYDROGRAPH TIME UNIT =  15.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  13.455
```

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.769	109.165
2	2.503	246.192
3	5.607	440.700
4	11.705	865.893
5	19.541	1112.436
6	28.150	1222.350
7	38.245	1433.362
8	50.481	1737.210
9	61.489	1562.958
10	71.036	1355.525
11	78.715	1090.149
12	84.429	811.359
13	88.652	599.610
14	91.643	424.615
15	94.103	349.349
16	95.820	243.696
17	96.981	164.906
18	97.922	133.528
19	98.261	48.163
20	98.513	35.819
21	98.765	35.798
22	99.018	35.820
23	99.270	35.798
24	99.522	35.798
25	99.774	35.798
26	100.000	32.063

TOTAL STORM RAINFALL(INCHES) = 2.98
TOTAL SOIL-LOSS(INCHES) = .40
TOTAL EFFECTIVE RAINFALL(INCHES) = 2.59

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 115.9658
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 758.8591

24-HOUR STORM RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0. 500.0 1000.0 1500.0 2000.0
14.083	195.2073	266.98	. Q V . . .
14.167	197.0461	266.98	. Q V . . .
14.250	198.8848	266.98	. Q V . . .
14.333	200.7629	272.71	. Q V . . .
14.417	202.6411	272.71	. Q V . . .
14.500	204.5192	272.71	. Q V . . .
14.583	206.4805	284.77	. Q V . . .
14.667	208.4417	284.77	. Q V . . .
14.750	210.4030	284.77	. Q V . . .
14.833	212.5149	306.66	. Q .V . . .
14.917	214.6269	306.66	. Q .V . . .
15.000	216.7388	306.66	. Q .V . . .
15.083	219.0617	337.28	. Q .V . . .
15.167	221.3846	337.28	. Q .V . . .
15.250	223.7075	337.28	. Q .V . . .
15.333	226.3001	376.45	. Q .V . . .
15.417	228.8927	376.45	. Q . V . . .
15.500	231.4853	376.45	. Q . V . . .
15.583	234.4333	428.04	. Q . V . . .
15.667	237.3812	428.04	. Q . V . . .
15.750	240.3292	428.04	. Q . V . . .
15.833	243.8320	508.61	. Q V . . .
15.917	247.3348	508.61	. Q V . . .
16.000	250.8377	508.61	. Q V . . .
16.083	255.3542	655.80	. . Q . . .
16.167	259.8707	655.80	. . Q . . .
16.250	264.3872	655.80	. . Q . . .
16.333	270.1286	833.65	. . V Q . . .
16.417	275.8699	833.65	. . V Q . . .
16.500	281.6113	833.65	. . V Q . . .
16.583	288.9677	1068.14	. . V .Q . . .
16.667	296.3240	1068.14	. . V .Q . . .
16.750	303.6804	1068.14	. . V .Q . . .
16.833	313.1969	1381.80	. . V . Q . . .
16.917	322.7134	1381.80	. . V . Q . . .
17.000	332.2299	1381.80	. . V . Q . . .
17.083	343.0684	1573.75	. . V . .Q . . .
17.167	353.9069	1573.75	. . V . .Q . . .
17.250	364.7454	1573.75	. . V. .Q . . .
17.333	376.3943	1691.43	. . V. . Q . . .
17.417	388.0433	1691.43	. . V . Q . . .
17.500	399.6923	1691.43	. . V . Q . . .
17.583	412.3574	1838.97	. . .V . Q . . .
17.667	425.0225	1838.97	. . . V . Q . . .
17.750	437.6876	1838.97	. . . V . Q . . .
17.833	451.0284	1937.08	. . . V . Q . . .
17.917	464.3691	1937.08	. . . V . Q . . .
18.000	477.7099	1937.08	. . . V . Q . . .

```
 18.083    489.8830   1767.53  .         .         .    V    .    Q    .
 18.167    502.0561   1767.53  .         .         .     V   .    Q    .
 18.250    514.2291   1767.53  .         .         .      V  .    Q    .
 18.333    524.9360   1554.65  .         .         .      V  .Q        .
 18.417    535.6429   1554.65  .         .         .       V .Q        .
 18.500    546.3499   1554.65  .         .         .       V .Q        .
 18.583    555.3281   1303.63  .         .         .    Q  V.          .
 18.667    564.3063   1303.63  .         .         .    Q  V.          .
 18.750    573.2845   1303.63  .         .         .    Q   V          .
 18.833    580.5565   1055.90  .         .        .Q        V          .
 18.917    587.8286   1055.90  .         .        .Q        V          .
 19.000    595.1006   1055.90  .         .        .Q         V         .

**************************************************************************
 FLOW PROCESS FROM NODE    50.09 TO NODE    50.10 IS CODE =  52
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<
==========================================================================

        THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
        TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
        INTERVALS(Reference: the National Engineering Handbook,
        Hydrology, Chapter 17, page 17-52, August,1972,
        U.S. Department of Commerce).


        ASSUMED REGULAR CHANNEL INFORMATION:
          BASEWIDTH(FT) =   50.00     CHANNEL Z =  3.00
          UPSTREAM ELEVATION =    2860.00
          DOWNSTREAM ELEVATION =    2830.00
          CHANNEL LENGTH(FT) =    7000.00     MANNING'S FACTOR =  .032
          CONSTANT LOSS RATE(CFS) =     .00


        CHANNEL ROUTING COEFFICIENT ESTIMATED:
          MAXIMUM INFLOW(CFS) =  1937.08
          AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW =  1517.29
          CHANNEL NORMAL VELOCITY FOR Q =  1517.29 CFS =   6.52 FPS
          ESTIMATED CHANNEL ROUTING COEFFICIENT =  .793

        MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
        UNIT INTERVALS IS CSTAR =  .592


        CONVEX METHOD CHANNEL ROUTING RESULTS:
                                          OUTFLOW LESS
         MODEL        INFLOW     ROUTED      LOSS
          TIME      (STREAM 1)    FLOW     (STREAM 1)
         (HRS)       (CFS)       (CFS)       (CFS)
         14.083        267.0       266.9       266.9
         14.167        267.0       266.3       266.3
         14.250        267.0       266.2       266.2
         14.333        272.7       266.7       266.7
         14.417        272.7       266.9       266.9
         14.500        272.7       267.5       267.5
         14.583        284.8       270.6       270.6
         14.667        284.8       271.8       271.8
         14.750        284.8       273.5       273.5
         14.833        306.7       280.2       280.2
```

14.917	306.7	282.9	282.9
15.000	306.7	286.1	286.1
15.083	337.3	298.3	298.3
15.167	337.3	303.2	303.2
15.250	337.3	308.2	308.2
15.333	376.4	325.4	325.4
15.417	376.4	332.4	332.4
15.500	376.4	339.0	339.0
15.583	428.0	361.2	361.2
15.667	428.0	370.2	370.2
15.750	428.0	378.8	378.8
15.833	508.6	407.9	407.9
15.917	508.6	419.8	419.8
16.000	508.6	432.4	432.4
16.083	655.8	477.5	477.5
16.167	655.8	495.9	495.9
16.250	655.8	517.5	517.5
16.333	833.6	599.3	599.3
16.417	833.6	632.7	632.7
16.500	833.6	663.3	663.3
16.583	1068.1	764.1	764.1
16.667	1068.1	805.2	805.2
16.750	1068.1	844.4	844.4
16.833	1381.8	976.8	976.8
16.917	1381.8	1030.8	1030.8
17.000	1381.8	1082.8	1082.8
17.083	1573.7	1259.7	1259.7
17.167	1573.7	1331.9	1331.9
17.250	1573.7	1379.7	1379.7
17.333	1691.4	1494.5	1494.5
17.417	1691.4	1541.4	1541.4
17.500	1691.4	1571.8	1571.8
17.583	1839.0	1642.5	1642.5
17.667	1839.0	1671.5	1671.5
17.750	1839.0	1697.3	1697.3
17.833	1937.1	1781.1	1781.1
17.917	1937.1	1815.3	1815.3
18.000	1937.1	1838.7	1838.7
18.083	1767.5	1896.9	1896.9
18.167	1767.5	1920.7	1920.7
18.250	1767.5	1914.2	1914.2
18.333	1554.6	1827.4	1827.4
18.417	1554.6	1792.0	1792.0
18.500	1554.6	1757.2	1757.2
18.583	1303.6	1637.4	1637.4
18.667	1303.6	1588.4	1588.4
18.750	1303.6	1544.5	1544.5
18.833	1055.9	1402.0	1402.0
18.917	1055.9	1343.8	1343.8
19.000	1055.9	1296.4	1296.4

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 758.860 AF
OUTFLOW VOLUME = 758.859 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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                        Analysis prepared by:

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 ************************* DESCRIPTION OF STUDY *************************
*               WATERSHED 50                                             *
*  HYDROGRAPH AT NODE 50.10 ROUTED TO NODE 50.11                         *
*                                                                        *
 **************************************************************************

  FILE NAME: HYD5010.INP
  TIME/DATE OF STUDY: 11:38   7/13/1992


**************************************************************************
  FLOW PROCESS FROM NODE    50.00 TO NODE    50.10 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    4826.500 ACRES
        BASEFLOW =    .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    2.156 HOURS
        VALLEY(DEVELOPED) S-GRAPH SELECTED
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .062
        LOW LOSS FRACTION =  .158
        *HYDROGRAPH MODEL #4 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .57
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=   .97
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.20
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.54
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.80
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  3.00

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .865
         30-MINUTE FACTOR =  .865
          1-HOUR FACTOR =  .865
          3-HOUR FACTOR =  .980
          6-HOUR FACTOR =  .990
         24-HOUR FACTOR =  .994

        UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  15.461
```

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.883	128.921
2	3.015	311.078
3	7.634	674.004
4	15.672	1173.016
5	25.216	1392.586
6	36.281	1614.779
7	50.057	2010.271
8	62.695	1844.123
9	73.315	1549.756
10	81.184	1148.377
11	87.009	849.964
12	90.838	558.775
13	93.799	432.065
14	95.825	295.672
15	97.151	193.544
16	98.069	133.835
17	98.377	44.999
18	98.667	42.308
19	98.957	42.308
20	99.247	42.289
21	99.536	42.289
22	99.826	42.289
23	100.000	25.374

TOTAL STORM RAINFALL(INCHES) = 2.98
TOTAL SOIL-LOSS(INCHES) = .37
TOTAL EFFECTIVE RAINFALL(INCHES) = 2.61

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 148.2396
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1050.6030

24 - HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	600.0	1200.0	1800.0	2400.0
14.083	261.4312	373.69	.	Q V.	.	.	.
14.167	264.0048	373.69	.	Q V	.	.	.
14.250	266.5784	373.69	.	Q V	.	.	.
14.333	269.1520	373.69	.	Q V	.	.	.
14.417	271.7889	382.88	.	Q V	.	.	.
14.500	274.4258	382.88	.	Q V	.	.	.
14.583	277.0628	382.88	.	Q V	.	.	.
14.667	279.6997	382.88	.	Q V	.	.	.
14.750	282.4937	405.69	.	Q V	.	.	.
14.833	285.2878	405.69	.	Q V	.	.	.
14.917	288.0818	405.69	.	Q V	.	.	.
15.000	290.8759	405.69	.	Q V	.	.	.
15.083	293.9641	448.41	.	Q .V	.	.	.
15.167	297.0523	448.41	.	Q .V	.	.	.
15.250	300.1405	448.41	.	Q .V	.	.	.
15.333	303.2288	448.41	.	Q .V	.	.	.
15.417	306.7453	510.61	.	Q .V	.	.	.
15.500	310.2619	510.61	.	Q .V	.	.	.
15.583	313.7785	510.61	.	Q .V	.	.	.
15.667	317.2950	510.61	.	Q . V	.	.	.
15.750	321.5330	615.35	.	Q V	.	.	.
15.833	325.7710	615.35	.	Q V	.	.	.
15.917	330.0090	615.35	.	Q V	.	.	.
16.000	334.2469	615.35	.	Q V	.	.	.
16.083	339.8814	818.13	.	. VQ	.	.	.
16.167	345.5159	818.13	.	. Q	.	.	.
16.250	351.1503	818.13	.	. Q	.	.	.
16.333	356.7848	818.13	.	. Q	.	.	.
16.417	364.2711	1087.02	.	. V Q	.	.	.
16.500	371.7575	1087.02	.	. V Q	.	.	.
16.583	379.2439	1087.02	.	. V Q	.	.	.
16.667	386.7302	1087.02	.	. V Q	.	.	.
16.750	396.8061	1463.02	.	. V .	Q	.	.
16.833	406.8820	1463.02	.	. V .	Q	.	.
16.917	416.9578	1463.02	.	. V .	Q	.	.
17.000	427.0337	1463.02	.	. V .	Q	.	.
17.083	439.7317	1843.75	.	. V .		Q	.
17.167	452.4297	1843.75	.	. V .		Q	.
17.250	465.1277	1843.75	.	. V .		Q	.
17.333	477.8257	1843.75	.	. V .		Q	.
17.417	491.9580	2052.01	.	. V .		. Q	.
17.500	506.0903	2052.01	.	. V.		. Q	.
17.583	520.2227	2052.01	.	. V.		. Q	.
17.667	534.3550	2052.01	.	. V		. Q	.
17.750	549.7722	2238.58	.	. V		.	Q .
17.833	565.1893	2238.58	.	. V		.	Q .
17.917	580.6065	2238.58	.	. V		.	Q .
18.000	596.0237	2238.58	.	. V		.	Q .

18.083	612.3854	2375.72	.	.	.	V	.		Q.	
18.167	628.7472	2375.72	.	.	.	V	.		Q.	
18.250	645.1089	2375.72	.	.	.	V	.		Q.	
18.333	661.4707	2375.72	.	.	.	V	.		Q.	
18.417	676.3974	2167.36	.	.	.	V	.	Q	.	
18.500	691.3241	2167.36	.	.	.	V	.	Q	.	
18.583	706.2508	2167.36	.	.	.	V	.	Q	.	
18.667	721.1775	2167.36	.	.	.	V	.	Q	.	
18.750	733.9198	1850.18	.	.	.	V	Q		.	
18.833	746.6621	1850.18	.	.	.	V	Q		.	
18.917	759.4044	1850.18	.	.	.	V	Q		.	
19.000	772.1467	1850.18	.	.	.	VQ			.	

****

FLOW PROCESS FROM NODE 50.10 TO NODE 50.11 IS CODE = 52

>>>>>MODEL CHANNEL ROUTING BY THE CONVEX METHOD<<<<<

==========

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER
TO ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE
INTERVALS(Reference: the National Engineering Handbook,
Hydrology, Chapter 17, page 17-52, August,1972,
U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 50.00 CHANNEL Z = 3.00
UPSTREAM ELEVATION = 2830.00
DOWNSTREAM ELEVATION = 2800.00
CHANNEL LENGTH(FT) = 4300.00 MANNING'S FACTOR = .032
CONSTANT LOSS RATE(CFS) = .00

CHANNEL ROUTING COEFFICIENT ESTIMATED:
MAXIMUM INFLOW(CFS) = 2375.72
AVERAGE FLOWRATE IN EXCESS OF 50% MAXIMUM INFLOW = 1934.58
CHANNEL NORMAL VELOCITY FOR Q = 1934.58 CFS = 8.31 FPS
ESTIMATED CHANNEL ROUTING COEFFICIENT = .830

MODIFIED CHANNEL ROUTING COEFFICIENT FOR 5-MINUTE
UNIT INTERVALS IS CSTAR = .758

CONVEX METHOD CHANNEL ROUTING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 1) (CFS)	ROUTED FLOW (CFS)	OUTFLOW LESS LOSS (STREAM 1) (CFS)
14.083	373.7	372.3	372.3
14.167	373.7	372.9	372.9
14.250	373.7	373.5	373.5
14.333	373.7	373.6	373.6
14.417	382.9	373.7	373.7
14.500	382.9	377.6	377.6
14.583	382.9	381.6	381.6
14.667	382.9	382.6	382.6
14.750	405.7	382.8	382.8
14.833	405.7	392.7	392.7

14.917	405.7	402.5	402.5
15.000	405.7	404.9	404.9
15.083	448.4	405.5	405.5
15.167	448.4	424.0	424.0
15.250	448.4	442.5	442.5
15.333	448.4	447.0	447.0
15.417	510.6	448.1	448.1
15.500	510.6	475.1	475.1
15.583	510.6	502.0	502.0
15.667	510.6	508.5	508.5
15.750	615.4	510.1	510.1
15.833	615.4	555.6	555.6
15.917	615.4	600.9	600.9
16.000	615.4	611.8	611.8
16.083	818.1	614.5	614.5
16.167	818.1	702.5	702.5
16.250	818.1	790.1	790.1
16.333	818.1	811.3	811.3
16.417	1087.0	816.5	816.5
16.500	1087.0	933.5	933.5
16.583	1087.0	1049.8	1049.8
16.667	1087.0	1078.0	1078.0
16.750	1463.0	1084.8	1084.8
16.833	1463.0	1248.4	1248.4
16.917	1463.0	1411.0	1411.0
17.000	1463.0	1450.4	1450.4
17.083	1843.7	1460.0	1460.0
17.167	1843.7	1626.2	1626.2
17.250	1843.7	1791.0	1791.0
17.333	1843.7	1831.0	1831.0
17.417	2052.0	1840.6	1840.6
17.500	2052.0	1932.7	1932.7
17.583	2052.0	2023.1	2023.1
17.667	2052.0	2045.0	2045.0
17.750	2238.6	2050.3	2050.3
17.833	2238.6	2131.9	2131.9
17.917	2238.6	2212.7	2212.7
18.000	2238.6	2232.3	2232.3
18.083	2375.7	2237.1	2237.1
18.167	2375.7	2297.3	2297.3
18.250	2375.7	2356.7	2356.7
18.333	2375.7	2371.1	2371.1
18.417	2167.4	2374.6	2374.6
18.500	2167.4	2285.7	2285.7
18.583	2167.4	2196.1	2196.1
18.667	2167.4	2174.3	2174.3
18.750	1850.2	2169.0	2169.0
18.833	1850.2	2031.2	2031.2
18.917	1850.2	1894.1	1894.1
19.000	1850.2	1860.8	1860.8

PROCESS SUMMARY OF STORAGE:
INFLOW VOLUME = 1050.603 AF
OUTFLOW VOLUME = 1050.603 AF
LOSS VOLUME = .000 AF

END OF FLOOD ROUTING ANALYSIS

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

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

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      TELEPHONE: (714) 586 - 6121          FAX: (714) 586 - 2217

 ************************* DESCRIPTION OF STUDY *************************
*       WATERSHED 50                                                   *
*  HYDROGRAPH AT NODE 50.11                                            *
* 1                                                                    *
 **************************************************************************

  FILE NAME: HYD5011.INP
  TIME/DATE OF STUDY: 11:45   7/13/1992


**************************************************************************
  FLOW PROCESS FROM NODE    50.00 TO NODE    50.11 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>UNIT-HYDROGRAPH ANALYSIS<<<<<
==========================================================================

     (UNIT-HYDROGRAPH ADDED TO STREAM #1)

        WATERSHED AREA =    7471.500 ACRES
        BASEFLOW =     .000 CFS/SQUARE-MILE
        *USER ENTERED "LAG" TIME =    2.300 HOURS
        VALLEY(DEVELOPED) S-GRAPH SELECTED
        MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =   .069
        LOW LOSS FRACTION =  .165
        *HYDROGRAPH MODEL #4 SPECIFIED*

        SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=   .57
        SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=   .97
        SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.20
        SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.54
        SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.80
        SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  3.00

        *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
          5-MINUTE FACTOR =  .865
         30-MINUTE FACTOR =  .865
          1-HOUR FACTOR =  .865
          3-HOUR FACTOR =  .980
          6-HOUR FACTOR =  .990
         24-HOUR FACTOR =  .994

        UNIT HYDROGRAPH TIME UNIT =  20.000 MINUTES
        UNIT INTERVAL PERCENTAGE OF LAG-TIME =  14.493
```

RUNOFF HYDROGRAPH LISTING LIMITS:
MODEL TIME(HOURS) FOR BEGINNING OF RESULTS = 14.00
MODEL TIME(HOURS) FOR END OF RESULTS = 19.00

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	.828	187.078
2	2.756	435.457
3	6.597	867.727
4	13.760	1618.162
5	22.437	1959.926
6	32.257	2218.357
7	44.206	2699.241
8	56.957	2880.310
9	67.952	2483.909
10	76.891	2019.138
11	83.426	1476.266
12	88.248	1089.404
13	91.541	743.890
14	94.179	595.793
15	95.978	406.309
16	97.187	273.257
17	98.057	196.570
18	98.349	65.939
19	98.621	61.358
20	98.893	61.405
21	99.164	61.372
22	99.436	61.372
23	99.708	61.372
24	99.979	61.372
25	100.000	4.631

TOTAL STORM RAINFALL(INCHES) = 2.98
TOTAL SOIL-LOSS(INCHES) = .39
TOTAL EFFECTIVE RAINFALL(INCHES) = 2.59

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 241.4094
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1614.4240

24 - HOUR STORM
RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE INTERVALS(CFS)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	875.0	1750.0	2625.0	3500.0
14.083	394.1843	574.84	.	Q V.	.	.	.
14.167	398.1432	574.84	.	Q V.	.	.	.
14.250	402.1022	574.84	.	Q V.	.	.	.
14.333	406.0611	574.84	.	Q V	.	.	.
14.417	410.1001	586.46	.	Q V	.	.	.
14.500	414.1390	586.46	.	Q V	.	.	.
14.583	418.1779	586.46	.	Q V	.	.	.
14.667	422.2169	586.46	.	Q V	.	.	.
14.750	426.4579	615.79	.	Q V	.	.	.
14.833	430.6989	615.79	.	Q V	.	.	.
14.917	434.9399	615.79	.	Q V	.	.	.
15.000	439.1809	615.79	.	Q V	.	.	.
15.083	443.8121	672.46	.	Q V	.	.	.
15.167	448.4434	672.46	.	Q V	.	.	.
15.250	453.0746	672.46	.	Q V	.	.	.
15.333	457.7059	672.46	.	Q V	.	.	.
15.417	462.9264	758.01	.	Q .V	.	.	.
15.500	468.1468	758.01	.	Q .V	.	.	.
15.583	473.3673	758.01	.	Q .V	.	.	.
15.667	478.5877	758.01	.	Q .V	.	.	.
15.750	484.8020	902.32	.	Q V	.	.	.
15.833	491.0163	902.32	.	Q V	.	.	.
15.917	497.2306	902.32	.	Q V	.	.	.
16.000	503.4449	902.32	.	Q V	.	.	.
16.083	511.6061	1185.01	.	. VQ	.	.	.
16.167	519.7673	1185.01	.	. VQ	.	.	.
16.250	527.9285	1185.01	.	. Q	.	.	.
16.333	536.0897	1185.01	.	. Q	.	.	.
16.417	546.7633	1549.81	.	. V Q	.	.	.
16.500	557.4369	1549.81	.	. V Q	.	.	.
16.583	568.1105	1549.81	.	. V Q	.	.	.
16.667	578.7841	1549.81	.	. V Q	.	.	.
16.750	592.9162	2051.98	.	. V	. Q	.	.
16.833	607.0483	2051.98	.	. V	. Q	.	.
16.917	621.1805	2051.98	.	. V	. Q	.	.
17.000	635.3126	2051.98	.	. V	. Q	.	.
17.083	653.4075	2627.39	.	. V	.	Q	.
17.167	671.5024	2627.39	.	. V	.	Q	.
17.250	689.5974	2627.39	.	. V	.	Q	.
17.333	707.6923	2627.39	.	. V	.	Q	.
17.417	727.9628	2943.28	.	. V	.	. Q	.
17.500	748.2333	2943.28	.	. V	.	. Q	.
17.583	768.5038	2943.28	.	. V.	.	. Q	.
17.667	788.7743	2943.28	.	. V.	.	. Q	.
17.750	810.7654	3193.10	.	. V	.	Q	.
17.833	832.7565	3193.10	.	. V	.	Q	.
17.917	854.7476	3193.10	.	. V	.	Q	.
18.000	876.7386	3193.10	.	. V	.	Q	.

18.083	900.4180	3438.24	.	.	.	V	.			Q.
18.167	924.0974	3438.24	.	.	.	V	.			Q.
18.250	947.7768	3438.24	.	.	.	V	.			Q.
18.333	971.4562	3438.24	.	.	.	V	.			Q.
18.417	994.7546	3382.93	.	.	.	V	.			Q .
18.500	1018.0530	3382.93	.	.	.	V	.			Q .
18.583	1041.3520	3382.93	.	.	.	V	.			Q .
18.667	1064.6500	3382.93	.	.	.	V	.			Q .
18.750	1085.1560	2977.42	.	.	.	V	.	Q		.
18.833	1105.6610	2977.42	.	.	.	V	.	Q		.
18.917	1126.1670	2977.42	.	.	.	V	.	Q		.
19.000	1146.6720	2977.42	.	.	.	V	.	Q		.

==========

END OF FLOOD ROUTING ANALYSIS

RIVERTECH INC

CLIENT _____ JOB NO. _____ COMPUTED BY _____

PROJECT _____ DATE CHECKED _____ DATE _____

DETAIL _____ CHECKED BY _____ PAGE NO. _____

WATERSHED #50

NODE#	AREA	F_m	$\bar{T}$	V	L	T.T.	LAG
50.06	813.7	0.109	0.227				1.123
				5.16	7000	0.376	
50.07	1609	0.073	0.175				1.499
				5.79	3000	0.144	
* 50.08	3019.5	0.076	0.178				1.643
				6.7	5200	0.215	
50.09	3592	0.069	0.169				1.858
				6.52	7000	0.298	
50.10	4826.5	0.062	0.158				2.156
				8.31	4300	0.144	
* 50.11	7471.5	0.069	0.165				2.3

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM PACKAGE
          (Reference: 1986 SAN BERNARDINO CO. HYDROLOGY CRITERION)
         (c) Copyright 1983-92 Advanced Engineering Software (aes)
             Ver. 1.5A  Release Date: 3/05/92  License ID 1263

                          Analysis prepared by:

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         TELEPHONE: (714) 586 - 6121           FAX: (714) 586 - 2217

 ************************* DESCRIPTION OF STUDY *************************
* RATIONAL METHOD FOR WATERSHED 50                                      *
*                                                                       *
*                                                                       *
 ************************************************************************

  FILE NAME: RATSC50.INP
  TIME/DATE OF STUDY: 12:40   7/ 6/1992
========================================================================
  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 =  .90
  *USER-DEFINED LOGARITHMIC INTERPOLATION USED FOR RAINFALL*

  SLOPE OF INTENSITY DURATION CURVE =  .7000
  USER SPECIFIED 1-HOUR INTENSITY(INCH/HOUR) = 1.2000



**************************************************************************
  FLOW PROCESS FROM NODE    50.00 TO NODE    50.01 IS CODE = 2.1
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
  DEVELOPMENT IS  SINGLE FAMILY RESIDENTIAL -> 1 DWELLING/ACRE
  TC = K*[(LENGTH** 3.00)/(ELEVATION CHANGE)]** .20
  INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
  UPSTREAM ELEVATION(FEET) =   3185.00
  DOWNSTREAM ELEVATION(FEET) =   3170.00
  ELEVATION DIFFERENCE(FEET) =     15.00
  TC(MIN.) =  .469*[( 1000.00** 3.00)/(    15.00)]** .20 =   17.217
   100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.876
  SOIL CLASSIFICATION IS "C"
  RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
  SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
  SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
  SUBAREA RUNOFF(CFS) =      8.74
  TOTAL AREA(ACRES) =      4.00   PEAK FLOW RATE(CFS) =      8.74


**************************************************************************
  FLOW PROCESS FROM NODE    50.01 TO NODE    50.02 IS CODE = 5.2
```

```
------------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
==============================================================================
 UPSTREAM NODE ELEVATION =   3170.00
 DOWNSTREAM NODE ELEVATION =   3140.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  2000.00
 CHANNEL SLOPE =   .0150
 CHANNEL FLOW THRU SUBAREA(CFS) =      8.74
 FLOW VELOCITY(FEET/SEC) =   2.96 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  11.27   TC(MIN.) =  28.48


******************************************************************************
 FLOW PROCESS FROM NODE    50.01 TO NODE    50.02 IS CODE =   8
------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.022
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .4480
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =    9.50      SUBAREA RUNOFF(CFS) =   13.45
 EFFECTIVE AREA(ACRES) =    13.50   AREA-AVERAGED Fm(INCH/HR) =   .45
 AREA-AVERAGED Fp(INCH/HR) =   .56  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =    13.50       PEAK FLOW RATE(CFS) =   19.12
 TC(MIN) =  28.48


******************************************************************************
 FLOW PROCESS FROM NODE    50.01 TO NODE    50.02 IS CODE =   8
------------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  2.022
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 1 DWELLING/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .6000
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .80
 SUBAREA AREA(ACRES) =    9.20      SUBAREA RUNOFF(CFS) =   11.77
 EFFECTIVE AREA(ACRES) =    22.70   AREA-AVERAGED Fm(INCH/HR) =   .51
 AREA-AVERAGED Fp(INCH/HR) =   .64  AREA-AVERAGED Ap =   .80
 TOTAL AREA(ACRES) =    22.70       PEAK FLOW RATE(CFS) =   30.89
 TC(MIN) =  28.48


******************************************************************************
 FLOW PROCESS FROM NODE    50.02 TO NODE    50.03 IS CODE = 5.2
------------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
==============================================================================
 UPSTREAM NODE ELEVATION =   3140.00
 DOWNSTREAM NODE ELEVATION =   3100.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  3000.00
 CHANNEL SLOPE =   .0133
 CHANNEL FLOW THRU SUBAREA(CFS) =     30.89
 FLOW VELOCITY(FEET/SEC) =   3.90 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  12.83   TC(MIN.) =  41.31
```

```
****************************************************************************
 FLOW PROCESS FROM NODE    50.02 TO NODE    50.03 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.558
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .5250
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =   83.00      SUBAREA RUNOFF(CFS) =   77.19
 EFFECTIVE AREA(ACRES) =   105.70   AREA-AVERAGED Fm(INCH/HR) =   .52
 AREA-AVERAGED Fp(INCH/HR) =   .72  AREA-AVERAGED Ap =   .72
 TOTAL AREA(ACRES) =   105.70       PEAK FLOW RATE(CFS) =   98.62
 TC(MIN) =  41.31


****************************************************************************
 FLOW PROCESS FROM NODE    50.03 TO NODE    50.04 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3100.00
 DOWNSTREAM NODE ELEVATION =   3050.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  4100.00
 CHANNEL SLOPE =   .0122
 CHANNEL FLOW THRU SUBAREA(CFS) =     98.62
 FLOW VELOCITY(FEET/SEC) =   5.22 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  13.09   TC(MIN.) =  54.40


****************************************************************************
 FLOW PROCESS FROM NODE    50.03 TO NODE    50.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.285
 SOIL CLASSIFICATION IS "B"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0750
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =   48.00      SUBAREA RUNOFF(CFS) =   52.28
 EFFECTIVE AREA(ACRES) =   153.70   AREA-AVERAGED Fm(INCH/HR) =   .38
 AREA-AVERAGED Fp(INCH/HR) =   .72  AREA-AVERAGED Ap =   .53
 TOTAL AREA(ACRES) =   153.70       PEAK FLOW RATE(CFS) =  124.91
 TC(MIN) =  54.40


****************************************************************************
 FLOW PROCESS FROM NODE    50.03 TO NODE    50.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.285
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .5250
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
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 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =   82.00      SUBAREA RUNOFF(CFS) =   56.10
 EFFECTIVE AREA(ACRES) =   235.70   AREA-AVERAGED Fm(INCH/HR) =   .43
 AREA-AVERAGED Fp(INCH/HR) =   .74  AREA-AVERAGED Ap =   .59
 TOTAL AREA(ACRES) =   235.70       PEAK FLOW RATE(CFS) =  181.02
 TC(MIN) =  54.40


****************************************************************************
 FLOW PROCESS FROM NODE    50.03 TO NODE    50.04 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.285
 SOIL CLASSIFICATION IS "B"
 PUBLIC PARK SUBAREA LOSS RATE, Fm(INCH/HR) =  .6375
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .85
 SUBAREA AREA(ACRES) =    2.00      SUBAREA RUNOFF(CFS) =    1.17
 EFFECTIVE AREA(ACRES) =   237.70   AREA-AVERAGED Fm(INCH/HR) =   .43
 AREA-AVERAGED Fp(INCH/HR) =   .74  AREA-AVERAGED Ap =   .59
 TOTAL AREA(ACRES) =   237.70       PEAK FLOW RATE(CFS) =  182.18
 TC(MIN) =  54.40


****************************************************************************
 FLOW PROCESS FROM NODE    50.04 TO NODE    50.05 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   3050.00
 DOWNSTREAM NODE ELEVATION =   2995.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  5000.00
 CHANNEL SLOPE =   .0110
 CHANNEL FLOW THRU SUBAREA(CFS) =    182.18
 FLOW VELOCITY(FEET/SEC) =   5.98 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  13.94   TC(MIN.) =  68.34


****************************************************************************
 FLOW PROCESS FROM NODE    50.04 TO NODE    50.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.095
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 5-7 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .3750
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .50
 SUBAREA AREA(ACRES) =   26.80      SUBAREA RUNOFF(CFS) =   17.38
 EFFECTIVE AREA(ACRES) =   264.50   AREA-AVERAGED Fm(INCH/HR) =   .43
 AREA-AVERAGED Fp(INCH/HR) =   .74  AREA-AVERAGED Ap =   .58
 TOTAL AREA(ACRES) =   264.50       PEAK FLOW RATE(CFS) =  182.18
 TC(MIN) =  68.34


****************************************************************************
 FLOW PROCESS FROM NODE    50.04 TO NODE    50.05 IS CODE =   8
----------------------------------------------------------------------------
```

```
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.095
 SOIL CLASSIFICATION IS "B"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0750
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =   99.20      SUBAREA RUNOFF(CFS) =   91.11
 EFFECTIVE AREA(ACRES) =   363.70   AREA-AVERAGED Fm(INCH/HR) =   .33
 AREA-AVERAGED Fp(INCH/HR) =   .74  AREA-AVERAGED Ap =   .45
 TOTAL AREA(ACRES) =   363.70       PEAK FLOW RATE(CFS) =  250.07
 TC(MIN) =  68.34


****************************************************************************
 FLOW PROCESS FROM NODE    50.04 TO NODE    50.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.095
 SOIL CLASSIFICATION IS "B"
 RESIDENTIAL-> 2 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .5250
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .70
 SUBAREA AREA(ACRES) =   18.40      SUBAREA RUNOFF(CFS) =    9.45
 EFFECTIVE AREA(ACRES) =   382.10   AREA-AVERAGED Fm(INCH/HR) =   .34
 AREA-AVERAGED Fp(INCH/HR) =   .74  AREA-AVERAGED Ap =   .46
 TOTAL AREA(ACRES) =   382.10       PEAK FLOW RATE(CFS) =  259.52
 TC(MIN) =  68.34


****************************************************************************
 FLOW PROCESS FROM NODE    50.04 TO NODE    50.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.095
 SOIL CLASSIFICATION IS "C"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0560
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =   51.40      SUBAREA RUNOFF(CFS) =   48.09
 EFFECTIVE AREA(ACRES) =   433.50   AREA-AVERAGED Fm(INCH/HR) =   .31
 AREA-AVERAGED Fp(INCH/HR) =   .73  AREA-AVERAGED Ap =   .42
 TOTAL AREA(ACRES) =   433.50       PEAK FLOW RATE(CFS) =  307.61
 TC(MIN) =  68.34


****************************************************************************
 FLOW PROCESS FROM NODE    50.04 TO NODE    50.05 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =  1.095
 SOIL CLASSIFICATION IS "B"
 PUBLIC PARK SUBAREA LOSS RATE, Fm(INCH/HR) =  .6375
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .85
 SUBAREA AREA(ACRES) =    6.20      SUBAREA RUNOFF(CFS) =    2.56
 EFFECTIVE AREA(ACRES) =   439.70   AREA-AVERAGED Fm(INCH/HR) =   .31
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 AREA-AVERAGED Fp(INCH/HR) =   .73  AREA-AVERAGED Ap =   .42
 TOTAL AREA(ACRES) =   439.70       PEAK FLOW RATE(CFS) =  310.16
 TC(MIN) =  68.34

****************************************************************************
 FLOW PROCESS FROM NODE    50.05 TO NODE    50.06 IS CODE = 5.2
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 UPSTREAM NODE ELEVATION =   2995.00
 DOWNSTREAM NODE ELEVATION =   2940.00
 CHANNEL LENGTH THRU SUBAREA(FEET) =  6100.00
 CHANNEL SLOPE =   .0090
 CHANNEL FLOW THRU SUBAREA(CFS) =    310.16
 FLOW VELOCITY(FEET/SEC) =   6.39 (PER LACFCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =  15.92   TC(MIN.) =  84.26

****************************************************************************
 FLOW PROCESS FROM NODE    50.05 TO NODE    50.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .946
 SOIL CLASSIFICATION IS "C"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0560
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =  328.00      SUBAREA RUNOFF(CFS) =  262.77
 EFFECTIVE AREA(ACRES) =   767.70   AREA-AVERAGED Fm(INCH/HR) =   .20
 AREA-AVERAGED Fp(INCH/HR) =   .71  AREA-AVERAGED Ap =   .29
 TOTAL AREA(ACRES) =   767.70       PEAK FLOW RATE(CFS) =  513.84
 TC(MIN) =  84.26

****************************************************************************
 FLOW PROCESS FROM NODE    50.05 TO NODE    50.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .946
 SOIL CLASSIFICATION IS "C"
 PUBLIC PARK SUBAREA LOSS RATE, Fm(INCH/HR) =  .4760
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .85
 SUBAREA AREA(ACRES) =    9.00      SUBAREA RUNOFF(CFS) =    3.81
 EFFECTIVE AREA(ACRES) =   776.70   AREA-AVERAGED Fm(INCH/HR) =   .21
 AREA-AVERAGED Fp(INCH/HR) =   .70  AREA-AVERAGED Ap =   .29
 TOTAL AREA(ACRES) =   776.70       PEAK FLOW RATE(CFS) =  517.65
 TC(MIN) =  84.26

****************************************************************************
 FLOW PROCESS FROM NODE    50.05 TO NODE    50.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .946
```

```
 SOIL CLASSIFICATION IS "C"
 RESIDENTIAL-> 5-7 DWELLINGS/ACRE SUBAREA LOSS RATE, Fm(INCH/HR) =  .2800
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .56
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .50
 SUBAREA AREA(ACRES) =    6.00      SUBAREA RUNOFF(CFS) =    3.60
 EFFECTIVE AREA(ACRES) =   782.70   AREA-AVERAGED Fm(INCH/HR) =   .21
 AREA-AVERAGED Fp(INCH/HR) =   .70  AREA-AVERAGED Ap =   .29
 TOTAL AREA(ACRES) =   782.70       PEAK FLOW RATE(CFS) =  521.24
 TC(MIN) =  84.26


****************************************************************************
 FLOW PROCESS FROM NODE    50.05 TO NODE    50.06 IS CODE =   8
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HR) =   .946
 SOIL CLASSIFICATION IS "B"
 COMMERCIAL SUBAREA LOSS RATE, Fm(INCH/HR) =  .0750
 SUBAREA PERVIOUS LOSS RATE, Fp(INCH/HR) =   .75
 SUBAREA PERVIOUS AREA FRACTION, Ap =   .10
 SUBAREA AREA(ACRES) =   31.00      SUBAREA RUNOFF(CFS) =   24.30
 EFFECTIVE AREA(ACRES) =   813.70   AREA-AVERAGED Fm(INCH/HR) =   .20
 AREA-AVERAGED Fp(INCH/HR) =   .70  AREA-AVERAGED Ap =   .29
 TOTAL AREA(ACRES) =   813.70       PEAK FLOW RATE(CFS) =  545.55
 TC(MIN) =  84.26
============================================================================
 END OF STUDY SUMMARY:
 TOTAL AREA(ACRES)      =    813.70  TC(MIN.) =     84.26
 EFFECTIVE AREA(ACRES) =    813.70  AREA-AVERAGED Fm(INCH/HR)=   .20
 AREA-AVERAGED Fp(INCH/HR) =   .70  AREA-AVERAGED Ap =   .29
 PEAK FLOW RATE(CFS)    =    545.55
============================================================================
============================================================================
 END OF RATIONAL METHOD ANALYSIS
```

LOSSRAT 5006 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 5006

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5001	4.00	.20	69.00
5002A	9.50	.20	69.00
5002B	9.20	.20	56.00
5003	83.00	.30	56.00
5004A	48.00	.90	56.00
5004B	82.00	.30	56.00
5004C	2.00	.15	65.00
5005A	26.80	.50	56.00
5005B	99.20	.90	56.00
5005C	18.40	.30	56.00
5005D	51.40	.90	69.00
5005E	6.20	.15	65.00
5006A	328.00	.90	69.00
5006B	9.00	.15	77.00
5006C	6.00	.50	69.00
5006D	31.00	.90	56.00

LOSSRAT 5006 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5006

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5001	3.20	.00	69.00	86.20	.29
5001	.80	1.00	98.00	98.00	.00
5001	4.00	.20			.23
5002A	7.60	.00	69.00	86.20	.29
5002A	1.90	1.00	98.00	98.00	.00
5002A	9.50	.20			.23
5002B	7.36	.00	56.00	75.80	.42
5002B	1.84	1.00	98.00	98.00	.00
5002B	9.20	.20			.34
5003	58.10	.00	56.00	75.80	.42
5003	24.90	1.00	98.00	98.00	.00
5003	83.00	.30			.29
5004A	4.80	.00	56.00	75.80	.42
5004A	43.20	1.00	98.00	98.00	.00
5004A	48.00	.90			.04
5004B	57.40	.00	56.00	75.80	.42
5004B	24.60	1.00	98.00	98.00	.00
5004B	82.00	.30			.29
5004C	1.70	.00	65.00	83.00	.31
5004C	.30	1.00	98.00	98.00	.00
5004C	2.00	.15			.27
5005A	13.40	.00	56.00	75.80	.42
5005A	13.40	1.00	98.00	98.00	.00
5005A	26.80	.50			.21
5005B	9.92	.00	56.00	75.80	.42
5005B	89.28	1.00	98.00	98.00	.00
5005B	99.20	.90			.04
5005C	12.88	.00	56.00	75.80	.42
5005C	5.52	1.00	98.00	98.00	.00
5005C	18.40	.30			.29
5005D	5.14	.00	69.00	86.20	.29
5005D	46.26	1.00	98.00	98.00	.00
5005D	51.40	.90			.03
5005E	5.27	.00	65.00	83.00	.31
5005E	.93	1.00	98.00	98.00	.00
5005E	6.20	.15			.27
5006A	32.80	.00	69.00	86.20	.29
5006A	295.20	1.00	98.00	98.00	.00
5006A	328.00	.90			.03
5006B	7.65	.00	77.00	92.20	.19
5006B	1.35	1.00	98.00	98.00	.00

5006B	9.00	.15	.16

LOSSRAT 5006 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5006

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5006C	3.00	.00	69.00	86.20	.29
5006C	3.00	1.00	98.00	98.00	.00
5006C	6.00	.50			.14
5006D	3.10	.00	56.00	75.80	.42
5006D	27.90	1.00	98.00	98.00	.00
5006D	31.00	.90			.04

LOSSRAT 5006 WATERSHED 50

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	813.70
24-HOUR RAIN (INCHES)	=	3.000
LOSS RATE FM (INCHES/HOUR)	=	.109
LOW LOSS FRACTION (Y BAR)	=	.227

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRAT 5007 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 5007

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5001	4.00	.20	69.00
5002A	9.50	.20	69.00
5002B	9.20	.20	56.00
5003	83.00	.30	56.00
5004A	48.00	.90	56.00
5004B	82.00	.30	56.00
5004C	2.00	.15	65.00
5005A	26.80	.50	56.00
5005B	99.20	.90	56.00
5005C	18.40	.30	56.00
5005D	51.40	.90	69.00
5005E	6.20	.15	65.00
5006A	328.00	.90	69.00
5006B	9.00	.15	77.00
5006C	6.00	.50	69.00
5006D	31.00	.90	56.00
5007A	743.00	.90	69.00
5007B	52.00	.15	77.00

LOSSRAT 5007 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5007

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5001	3.20	.00	69.00	86.20	.29
5001	.80	1.00	98.00	98.00	.00
5001	4.00	.20			.23
5002A	7.60	.00	69.00	86.20	.29
5002A	1.90	1.00	98.00	98.00	.00
5002A	9.50	.20			.23
5002B	7.36	.00	56.00	75.80	.42
5002B	1.84	1.00	98.00	98.00	.00
5002B	9.20	.20			.34
5003	58.10	.00	56.00	75.80	.42
5003	24.90	1.00	98.00	98.00	.00
5003	83.00	.30			.29
5004A	4.80	.00	56.00	75.80	.42
5004A	43.20	1.00	98.00	98.00	.00
5004A	48.00	.90			.04
5004B	57.40	.00	56.00	75.80	.42
5004B	24.60	1.00	98.00	98.00	.00
5004B	82.00	.30			.29
5004C	1.70	.00	65.00	83.00	.31
5004C	.30	1.00	98.00	98.00	.00
5004C	2.00	.15			.27
5005A	13.40	.00	56.00	75.80	.42
5005A	13.40	1.00	98.00	98.00	.00
5005A	26.80	.50			.21
5005B	9.92	.00	56.00	75.80	.42
5005B	89.28	1.00	98.00	98.00	.00
5005B	99.20	.90			.04
5005C	12.88	.00	56.00	75.80	.42
5005C	5.52	1.00	98.00	98.00	.00
5005C	18.40	.30			.29
5005D	5.14	.00	69.00	86.20	.29
5005D	46.26	1.00	98.00	98.00	.00
5005D	51.40	.90			.03
5005E	5.27	.00	65.00	83.00	.31
5005E	.93	1.00	98.00	98.00	.00
5005E	6.20	.15			.27
5006A	32.80	.00	69.00	86.20	.29
5006A	295.20	1.00	98.00	98.00	.00
5006A	328.00	.90			.03
5006B	7.65	.00	77.00	92.20	.19
5006B	1.35	1.00	98.00	98.00	.00

5006B	9.00	.15	.16

LOSSRAT 5007 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5007

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5006C	3.00	.00	69.00	86.20	.29
5006C	3.00	1.00	98.00	98.00	.00
5006C	6.00	.50			.14
5006D	3.10	.00	56.00	75.80	.42
5006D	27.90	1.00	98.00	98.00	.00
5006D	31.00	.90			.04
5007A	74.30	.00	69.00	86.20	.29
5007A	668.70	1.00	98.00	98.00	.00
5007A	743.00	.90			.03
5007B	44.20	.00	77.00	92.20	.19
5007B	7.80	1.00	98.00	98.00	.00
5007B	52.00	.15			.16

LOSSRAT 5007 WATERSHED 50

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	1608.70
24-HOUR RAIN (INCHES)	=	3.000
LOSS RATE FM (INCHES/HOUR)	=	.073
LOW LOSS FRACTION (Y BAR)	=	.175

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRAT WATERSHE
DATE · 7/13/92

LOSSRAT 50.06 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 5006

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5001	4.00	.20	69.00
5002A	9.50	.20	69.00
5002B	9.20	.20	56.00
5003	83.00	.30	56.00
5004A	48.00	.90	56.00
5004B	82.00	.30	56.00
5004C	2.00	.15	65.00
5005A	26.80	.50	56.00
5005B	99.20	.90	56.00
5005C	18.40	.30	56.00
5005D	51.40	.90	69.00
5005E	6.20	.15	65.00
5006A	328.00	.90	69.00
5006B	9.00	.15	77.00
5006C	6.00	.50	69.00
5006D	31.00	.90	56.00

LOSSRAT 50.06 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5006

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5001	3.20	.00	69.00	86.20	.29
5001	.80	1.00	98.00	98.00	.00
5001	4.00	.20			.23
5002A	7.60	.00	69.00	86.20	.29
5002A	1.90	1.00	98.00	98.00	.00
5002A	9.50	.20			.23
5002B	7.36	.00	56.00	75.80	.42
5002B	1.84	1.00	98.00	98.00	.00
5002B	9.20	.20			.34
5003	58.10	.00	56.00	75.80	.42
5003	24.90	1.00	98.00	98.00	.00
5003	83.00	.30			.29
5004A	4.80	.00	56.00	75.80	.42
5004A	43.20	1.00	98.00	98.00	.00
5004A	48.00	.90			.04
5004B	57.40	.00	56.00	75.80	.42
5004B	24.60	1.00	98.00	98.00	.00
5004B	82.00	.30			.29
5004C	1.70	.00	65.00	83.00	.31
5004C	.30	1.00	98.00	98.00	.00
5004C	2.00	.15			.27
5005A	13.40	.00	56.00	75.80	.42
5005A	13.40	1.00	98.00	98.00	.00
5005A	26.80	.50			.21
5005B	9.92	.00	56.00	75.80	.42
5005B	89.28	1.00	98.00	98.00	.00
5005B	99.20	.90			.04
5005C	12.88	.00	56.00	75.80	.42
5005C	5.52	1.00	98.00	98.00	.00
5005C	18.40	.30			.29
5005D	5.14	.00	69.00	86.20	.29
5005D	46.26	1.00	98.00	98.00	.00
5005D	51.40	.90			.03
5005E	5.27	.00	65.00	83.00	.31
5005E	.93	1.00	98.00	98.00	.00
5005E	6.20	.15			.27
5006A	32.80	.00	69.00	86.20	.29
5006A	295.20	1.00	98.00	98.00	.00
5006A	328.00	.90			.03
5006B	7.65	.00	77.00	92.20	.19
5006B	1.35	1.00	98.00	98.00	.00

5006B	9.00	.15	.16

LOSSRAT 50.06 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5006

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5006C	3.00	.00	69.00	86.20	.29
5006C	3.00	1.00	98.00	98.00	.00
5006C	6.00	.50			.14
5006D	3.10	.00	56.00	75.80	.42
5006D	27.90	1.00	98.00	98.00	.00
5006D	31.00	.90			.04

LOSSRAT 50.06 WATERSHED 50

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	813.70
24-HOUR RAIN (INCHES)	=	3.000
LOSS RATE FM (INCHES/HOUR)	=	.109
LOW LOSS FRACTION (Y BAR)	=	.227

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRAT 50.07 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 5007

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5001	4.00	.20	69.00
5002A	9.50	.20	69.00
5002B	9.20	.20	56.00
5003	83.00	.30	56.00
5004A	48.00	.90	56.00
5004B	82.00	.30	56.00
5004C	2.00	.15	65.00
5005A	26.80	.50	56.00
5005B	99.20	.90	56.00
5005C	18.40	.30	56.00
5005D	51.40	.90	69.00
5005E	6.20	.15	65.00
5006A	328.00	.90	69.00
5006B	9.00	.15	77.00
5006C	6.00	.50	69.00
5006D	31.00	.90	56.00
5007A	743.00	.90	69.00
5007B	52.00	.15	77.00

LOSSRAT 50.07 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5007

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5001	3.20	.00	69.00	86.20	.29
5001	.80	1.00	98.00	98.00	.00
5001	4.00	.20			.23
5002A	7.60	.00	69.00	86.20	.29
5002A	1.90	1.00	98.00	98.00	.00
5002A	9.50	.20			.23
5002B	7.36	.00	56.00	75.80	.42
5002B	1.84	1.00	98.00	98.00	.00
5002B	9.20	.20			.34
5003	58.10	.00	56.00	75.80	.42
5003	24.90	1.00	98.00	98.00	.00
5003	83.00	.30			.29
5004A	4.80	.00	56.00	75.80	.42
5004A	43.20	1.00	98.00	98.00	.00
5004A	48.00	.90			.04
5004B	57.40	.00	56.00	75.80	.42
5004B	24.60	1.00	98.00	98.00	.00
5004B	82.00	.30			.29
5004C	1.70	.00	65.00	83.00	.31
5004C	.30	1.00	98.00	98.00	.00
5004C	2.00	.15			.27
5005A	13.40	.00	56.00	75.80	.42
5005A	13.40	1.00	98.00	98.00	.00
5005A	26.80	.50			.21
5005B	9.92	.00	56.00	75.80	.42
5005B	89.28	1.00	98.00	98.00	.00
5005B	99.20	.90			.04
5005C	12.88	.00	56.00	75.80	.42
5005C	5.52	1.00	98.00	98.00	.00
5005C	18.40	.30			.29
5005D	5.14	.00	69.00	86.20	.29
5005D	46.26	1.00	98.00	98.00	.00
5005D	51.40	.90			.03
5005E	5.27	.00	65.00	83.00	.31
5005E	.93	1.00	98.00	98.00	.00
5005E	6.20	.15			.27
5006A	32.80	.00	69.00	86.20	.29
5006A	295.20	1.00	98.00	98.00	.00
5006A	328.00	.90			.03
5006B	7.65	.00	77.00	92.20	.19
5006B	1.35	1.00	98.00	98.00	.00

5006B	9.00	.15	.16

LOSSRAT 50.07 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5007

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5006C	3.00	.00	69.00	86.20	.29
5006C	3.00	1.00	98.00	98.00	.00
5006C	6.00	.50			.14
5006D	3.10	.00	56.00	75.80	.42
5006D	27.90	1.00	98.00	98.00	.00
5006D	31.00	.90			.04
5007A	74.30	.00	69.00	86.20	.29
5007A	668.70	1.00	98.00	98.00	.00
5007A	743.00	.90			.03
5007B	44.20	.00	77.00	92.20	.19
5007B	7.80	1.00	98.00	98.00	.00
5007B	52.00	.15			.16

LOSSRAT 50.07 WATERSHED 50

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	1608.70
24-HOUR RAIN (INCHES)	=	3.000
LOSS RATE FM (INCHES/HOUR)	=	.073
LOW LOSS FRACTION (Y BAR)	=	.175

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRAT 50.08 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 5008

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5001	4.00	.20	69.00
5002A	9.50	.20	69.00
5002B	9.20	.20	56.00
5003	83.00	.30	56.00
5004A	48.00	.90	56.00
5004B	82.00	.30	56.00
5004C	2.00	.15	65.00
5005A	26.80	.50	56.00
5005B	99.20	.90	56.00
5005C	18.40	.30	56.00
5005D	51.40	.90	69.00
5005E	6.20	.15	65.00
5006A	328.00	.90	69.00
5006B	9.00	.15	77.00
5006C	6.00	.50	69.00
5006D	31.00	.90	56.00
5007A	743.00	.90	69.00
5007B	52.00	.15	77.00
5008	180.00	.90	69.00
5001A'	5.50	.30	56.00
5002A"	4.20	.15	65.00
5002B"	52.70	.30	56.00
5003A"	88.10	.30	56.00
5003B"	29.70	.50	56.00
5003C"	5.20	.15	65.00
5004A"	16.20	.30	69.00
5004B"	22.10	.50	69.00
5004C"	51.40	.90	69.00
5004D"	7.10	.50	56.00
5004E	26.60	.30	56.00
5005A"	12.00	.15	77.00
5005B"	320.00	.90	69.00
5008A"	70.00	.15	77.00
5008B"	520.00	.90	69.00

LOSSRAT 50.08 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5008

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5001	3.20	.00	69.00	86.20	.29
5001	.80	1.00	98.00	98.00	.00
5001	4.00	.20			.23
5002A	7.60	.00	69.00	86.20	.29
5002A	1.90	1.00	98.00	98.00	.00
5002A	9.50	.20			.23
5002B	7.36	.00	56.00	75.80	.42
5002B	1.84	1.00	98.00	98.00	.00
5002B	9.20	.20			.34
5003	58.10	.00	56.00	75.80	.42
5003	24.90	1.00	98.00	98.00	.00
5003	83.00	.30			.29
5004A	4.80	.00	56.00	75.80	.42
5004A	43.20	1.00	98.00	98.00	.00
5004A	48.00	.90			.04
5004B	57.40	.00	56.00	75.80	.42
5004B	24.60	1.00	98.00	98.00	.00
5004B	82.00	.30			.29
5004C	1.70	.00	65.00	83.00	.31
5004C	.30	1.00	98.00	98.00	.00
5004C	2.00	.15			.27
5005A	13.40	.00	56.00	75.80	.42
5005A	13.40	1.00	98.00	98.00	.00
5005A	26.80	.50			.21
5005B	9.92	.00	56.00	75.80	.42
5005B	89.28	1.00	98.00	98.00	.00
5005B	99.20	.90			.04
5005C	12.88	.00	56.00	75.80	.42
5005C	5.52	1.00	98.00	98.00	.00
5005C	18.40	.30			.29
5005D	5.14	.00	69.00	86.20	.29
5005D	46.26	1.00	98.00	98.00	.00
5005D	51.40	.90			.03
5005E	5.27	.00	65.00	83.00	.31
5005E	.93	1.00	98.00	98.00	.00
5005E	6.20	.15			.27
5006A	32.80	.00	69.00	86.20	.29
5006A	295.20	1.00	98.00	98.00	.00
5006A	328.00	.90			.03
5006B	7.65	.00	77.00	92.20	.19
5006B	1.35	1.00	98.00	98.00	.00

5006B	9.00	.15	.16

LOSSRAT 50.08 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5008

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5006C	3.00	.00	69.00	86.20	.29
5006C	3.00	1.00	98.00	98.00	.00
5006C	6.00	.50			.14
5006D	3.10	.00	56.00	75.80	.42
5006D	27.90	1.00	98.00	98.00	.00
5006D	31.00	.90			.04
5007A	74.30	.00	69.00	86.20	.29
5007A	668.70	1.00	98.00	98.00	.00
5007A	743.00	.90			.03
5007B	44.20	.00	77.00	92.20	.19
5007B	7.80	1.00	98.00	98.00	.00
5007B	52.00	.15			.16
5008	18.00	.00	69.00	86.20	.29
5008	162.00	1.00	98.00	98.00	.00
5008	180.00	.90			.03
5001A'	3.85	.00	56.00	75.80	.42
5001A'	1.65	1.00	98.00	98.00	.00
5001A'	5.50	.30			.29
5002A"	3.57	.00	65.00	83.00	.31
5002A"	.63	1.00	98.00	98.00	.00
5002A"	4.20	.15			.27
5002B"	36.89	.00	56.00	75.80	.42
5002B"	15.81	1.00	98.00	98.00	.00
5002B"	52.70	.30			.29
5003A"	61.67	.00	56.00	75.80	.42
5003A"	26.43	1.00	98.00	98.00	.00
5003A"	88.10	.30			.29
5003B"	14.85	.00	56.00	75.80	.42
5003B"	14.85	1.00	98.00	98.00	.00
5003B"	29.70	.50			.21
5003C"	4.42	.00	65.00	83.00	.31
5003C"	.78	1.00	98.00	98.00	.00
5003C"	5.20	.15			.27
5004A"	11.34	.00	69.00	86.20	.29
5004A"	4.86	1.00	98.00	98.00	.00
5004A"	16.20	.30			.20
5004B"	11.05	.00	69.00	86.20	.29
5004B"	11.05	1.00	98.00	98.00	.00
5004B"	22.10	.50			.14
5004C"	5.14	.00	69.00	86.20	.29
5004C"	46.26	1.00	98.00	98.00	.00

5004C"	51.40	.90	.03

LOSSRAT 50.08 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5008

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5004D"	3.55	.00	56.00	75.80	.42
5004D"	3.55	1.00	98.00	98.00	.00
5004D"	7.10	.50			.21
5004E	18.62	.00	56.00	75.80	.42
5004E	7.98	1.00	98.00	98.00	.00
5004E	26.60	.30			.29
5005A"	10.20	.00	77.00	92.20	.19
5005A"	1.80	1.00	98.00	98.00	.00
5005A"	12.00	.15			.16
5005B"	32.00	.00	69.00	86.20	.29
5005B"	288.00	1.00	98.00	98.00	.00
5005B"	320.00	.90			.03
5008A"	59.50	.00	77.00	92.20	.19
5008A"	10.50	1.00	98.00	98.00	.00
5008A"	70.00	.15			.16
5008B"	52.00	.00	69.00	86.20	.29
5008B"	468.00	1.00	98.00	98.00	.00
5008B"	520.00	.90			.03

LOSSRAT 50.08 WATERSHED 50

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	3019.50
24-HOUR RAIN (INCHES)	=	3.000
LOSS RATE FM (INCHES/HOUR)	=	.076
LOW LOSS FRACTION (Y BAR)	=	.178

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRAT 50.09 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 5009

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5001	4.00	.20	69.00
5002A	9.50	.20	69.00
5002B	9.20	.20	56.00
5003	83.00	.30	56.00
5004A	48.00	.90	56.00
5004B	82.00	.30	56.00
5004C	2.00	.15	65.00
5005A	26.80	.50	56.00
5005B	99.20	.90	56.00
5005C	18.40	.30	56.00
5005D	51.40	.90	69.00
5005E	6.20	.15	65.00
5006A	328.00	.90	69.00
5006B	9.00	.15	77.00
5006C	6.00	.50	69.00
5006D	31.00	.90	56.00
5007A	743.00	.90	69.00
5007B	52.00	.15	77.00
5008	180.00	.90	69.00
5001A'	5.50	.30	56.00
5002A"	4.20	.15	65.00
5002B"	52.70	.30	56.00
5003A"	88.10	.30	56.00
5003B"	29.70	.50	56.00
5003C"	5.20	.15	65.00
5004A"	16.20	.30	69.00
5004B"	22.10	.50	69.00
5004C"	51.40	.90	69.00
5004D"	7.10	.50	56.00
5004E	26.60	.30	56.00
5005A"	12.00	.15	77.00
5005B"	320.00	.90	69.00
5008A"	70.00	.15	77.00
5008B"	520.00	.90	69.00
5009	502.30	.90	69.00

LOSSRAT 50.09 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5009

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5001	3.20	.00	69.00	86.20	.29
5001	.80	1.00	98.00	98.00	.00
5001	4.00	.20			.23
5002A	7.60	.00	69.00	86.20	.29
5002A	1.90	1.00	98.00	98.00	.00
5002A	9.50	.20			.23
5002B	7.36	.00	56.00	75.80	.42
5002B	1.84	1.00	98.00	98.00	.00
5002B	9.20	.20			.34
5003	58.10	.00	56.00	75.80	.42
5003	24.90	1.00	98.00	98.00	.00
5003	83.00	.30			.29
5004A	4.80	.00	56.00	75.80	.42
5004A	43.20	1.00	98.00	98.00	.00
5004A	48.00	.90			.04
5004B	57.40	.00	56.00	75.80	.42
5004B	24.60	1.00	98.00	98.00	.00
5004B	82.00	.30			.29
5004C	1.70	.00	65.00	83.00	.31
5004C	.30	1.00	98.00	98.00	.00
5004C	2.00	.15			.27
5005A	13.40	.00	56.00	75.80	.42
5005A	13.40	1.00	98.00	98.00	.00
5005A	26.80	.50			.21
5005B	9.92	.00	56.00	75.80	.42
5005B	89.28	1.00	98.00	98.00	.00
5005B	99.20	.90			.04
5005C	12.88	.00	56.00	75.80	.42
5005C	5.52	1.00	98.00	98.00	.00
5005C	18.40	.30			.29
5005D	5.14	.00	69.00	86.20	.29
5005D	46.26	1.00	98.00	98.00	.00
5005D	51.40	.90			.03
5005E	5.27	.00	65.00	83.00	.31
5005E	.93	1.00	98.00	98.00	.00
5005E	6.20	.15			.27
5006A	32.80	.00	69.00	86.20	.29
5006A	295.20	1.00	98.00	98.00	.00
5006A	328.00	.90			.03
5006B	7.65	.00	77.00	92.20	.19
5006B	1.35	1.00	98.00	98.00	.00

5006B	9.00	.15	.16

LOSSRAT 50.09 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5009

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-ll	RUNOFF CURVE NO. AMC-lll	LOSS RATE FM (IN/HR)
5006C	3.00	.00	69.00	86.20	.29
5006C	3.00	1.00	98.00	98.00	.00
5006C	6.00	.50			.14
5006D	3.10	.00	56.00	75.80	.42
5006D	27.90	1.00	98.00	98.00	.00
5006D	31.00	.90			.04
5007A	74.30	.00	69.00	86.20	.29
5007A	668.70	1.00	98.00	98.00	.00
5007A	743.00	.90			.03
5007B	44.20	.00	77.00	92.20	.19
5007B	7.80	1.00	98.00	98.00	.00
5007B	52.00	.15			.16
5008	18.00	.00	69.00	86.20	.29
5008	162.00	1.00	98.00	98.00	.00
5008	180.00	.90			.03
5001A'	3.85	.00	56.00	75.80	.42
5001A'	1.65	1.00	98.00	98.00	.00
5001A'	5.50	.30			.29
5002A"	3.57	.00	65.00	83.00	.31
5002A"	.63	1.00	98.00	98.00	.00
5002A"	4.20	.15			.27
5002B"	36.89	.00	56.00	75.80	.42
5002B"	15.81	1.00	98.00	98.00	.00
5002B"	52.70	.30			.29
5003A"	61.67	.00	56.00	75.80	.42
5003A"	26.43	1.00	98.00	98.00	.00
5003A"	88.10	.30			.29
5003B"	14.85	.00	56.00	75.80	.42
5003B"	14.85	1.00	98.00	98.00	.00
5003B"	29.70	.50			.21
5003C"	4.42	.00	65.00	83.00	.31
5003C"	.78	1.00	98.00	98.00	.00
5003C"	5.20	.15			.27
5004A"	11.34	.00	69.00	86.20	.29
5004A"	4.86	1.00	98.00	98.00	.00
5004A"	16.20	.30			.20
5004B"	11.05	.00	69.00	86.20	.29
5004B"	11.05	1.00	98.00	98.00	.00
5004B"	22.10	.50			.14
5004C"	5.14	.00	69.00	86.20	.29
5004C"	46.26	1.00	98.00	98.00	.00

5004C"	51.40	.90	.03

LOSSRAT 50.09 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5009

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5004D"	3.55	.00	56.00	75.80	.42
5004D"	3.55	1.00	98.00	98.00	.00
5004D"	7.10	.50			.21
5004E	18.62	.00	56.00	75.80	.42
5004E	7.98	1.00	98.00	98.00	.00
5004E	26.60	.30			.29
5005A"	10.20	.00	77.00	92.20	.19
5005A"	1.80	1.00	98.00	98.00	.00
5005A"	12.00	.15			.16
5005B"	32.00	.00	69.00	86.20	.29
5005B"	288.00	1.00	98.00	98.00	.00
5005B"	320.00	.90			.03
5008A"	59.50	.00	77.00	92.20	.19
5008A"	10.50	1.00	98.00	98.00	.00
5008A"	70.00	.15			.16
5008B"	52.00	.00	69.00	86.20	.29
5008B"	468.00	1.00	98.00	98.00	.00
5008B"	520.00	.90			.03
5009	50.23	.00	69.00	86.20	.29
5009	452.07	1.00	98.00	98.00	.00
5009	502.30	.90			.03

LOSSRAT 50.09 WATERSHED 50

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	3521.80
24-HOUR RAIN (INCHES)	=	3.000
LOSS RATE FM (INCHES/HOUR)	=	.069
LOW LOSS FRACTION (Y BAR)	=	.169

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRAT 50.10 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 50.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5001	4.00	.20	69.00
5002A	9.50	.20	69.00
5002B	9.20	.20	56.00
5003	83.00	.30	56.00
5004A	48.00	.90	56.00
5004B	82.00	.30	56.00
5004C	2.00	.15	65.00
5005A	26.80	.50	56.00
5005B	99.20	.90	56.00
5005C	18.40	.30	56.00
5005D	51.40	.90	69.00
5005E	6.20	.15	65.00
5006A	328.00	.90	69.00
5006B	9.00	.15	77.00
5006C	6.00	.50	69.00
5006D	31.00	.90	56.00
5007A	743.00	.90	69.00
5007B	52.00	.15	77.00
5008	180.00	.90	69.00
5001A'	5.50	.30	56.00
5002A"	4.20	.15	65.00
5002B"	52.70	.30	56.00
5003A"	88.10	.30	56.00
5003B"	29.70	.50	56.00
5003C"	5.20	.15	65.00
5004A"	16.20	.30	69.00
5004B"	22.10	.50	69.00
5004C"	51.40	.90	69.00
5004D"	7.10	.50	56.00
5004E	26.60	.30	56.00
5005A"	12.00	.15	77.00
5005B"	320.00	.90	69.00
5008A"	70.00	.15	77.00
5008B"	520.00	.90	69.00
5009	502.30	.90	69.00
5010A	853.90	.90	69.00
5010B	56.00	.15	77.00
5010C	394.80	.80	69.00

LOSSRAT 50.10 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 50.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5001	3.20	.00	69.00	86.20	.29
5001	.80	1.00	98.00	98.00	.00
5001	4.00	.20			.23
5002A	7.60	.00	69.00	86.20	.29
5002A	1.90	1.00	98.00	98.00	.00
5002A	9.50	.20			.23
5002B	7.36	.00	56.00	75.80	.42
5002B	1.84	1.00	98.00	98.00	.00
5002B	9.20	.20			.34
5003	58.10	.00	56.00	75.80	.42
5003	24.90	1.00	98.00	98.00	.00
5003	83.00	.30			.29
5004A	4.80	.00	56.00	75.80	.42
5004A	43.20	1.00	98.00	98.00	.00
5004A	48.00	.90			.04
5004B	57.40	.00	56.00	75.80	.42
5004B	24.60	1.00	98.00	98.00	.00
5004B	82.00	.30			.29
5004C	1.70	.00	65.00	83.00	.31
5004C	.30	1.00	98.00	98.00	.00
5004C	2.00	.15			.27
5005A	13.40	.00	56.00	75.80	.42
5005A	13.40	1.00	98.00	98.00	.00
5005A	26.80	.50			.21
5005B	9.92	.00	56.00	75.80	.42
5005B	89.28	1.00	98.00	98.00	.00
5005B	99.20	.90			.04
5005C	12.88	.00	56.00	75.80	.42
5005C	5.52	1.00	98.00	98.00	.00
5005C	18.40	.30			.29
5005D	5.14	.00	69.00	86.20	.29
5005D	46.26	1.00	98.00	98.00	.00
5005D	51.40	.90			.03
5005E	5.27	.00	65.00	83.00	.31
5005E	.93	1.00	98.00	98.00	.00
5005E	6.20	.15			.27
5006A	32.80	.00	69.00	86.20	.29
5006A	295.20	1.00	98.00	98.00	.00
5006A	328.00	.90			.03
5006B	7.65	.00	77.00	92.20	.19
5006B	1.35	1.00	98.00	98.00	.00

5006B	9.00	.15	.16

LOSSRAT 50.10 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 50.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5006C	3.00	.00	69.00	86.20	.29
5006C	3.00	1.00	98.00	98.00	.00
5006C	6.00	.50			.14
5006D	3.10	.00	56.00	75.80	.42
5006D	27.90	1.00	98.00	98.00	.00
5006D	31.00	.90			.04
5007A	74.30	.00	69.00	86.20	.29
5007A	668.70	1.00	98.00	98.00	.00
5007A	743.00	.90			.03
5007B	44.20	.00	77.00	92.20	.19
5007B	7.80	1.00	98.00	98.00	.00
5007B	52.00	.15			.16
5008	18.00	.00	69.00	86.20	.29
5008	162.00	1.00	98.00	98.00	.00
5008	180.00	.90			.03
5001A'	3.85	.00	56.00	75.80	.42
5001A'	1.65	1.00	98.00	98.00	.00
5001A'	5.50	.30			.29
5002A"	3.57	.00	65.00	83.00	.31
5002A"	.63	1.00	98.00	98.00	.00
5002A"	4.20	.15			.27
5002B"	36.89	.00	56.00	75.80	.42
5002B"	15.81	1.00	98.00	98.00	.00
5002B"	52.70	.30			.29
5003A"	61.67	.00	56.00	75.80	.42
5003A"	26.43	1.00	98.00	98.00	.00
5003A"	88.10	.30			.29
5003B"	14.85	.00	56.00	75.80	.42
5003B"	14.85	1.00	98.00	98.00	.00
5003B"	29.70	.50			.21
5003C"	4.42	.00	65.00	83.00	.31
5003C"	.78	1.00	98.00	98.00	.00
5003C"	5.20	.15			.27
5004A"	11.34	.00	69.00	86.20	.29
5004A"	4.86	1.00	98.00	98.00	.00
5004A"	16.20	.30			.20
5004B"	11.05	.00	69.00	86.20	.29
5004B"	11.05	1.00	98.00	98.00	.00
5004B"	22.10	.50			.14
5004C"	5.14	.00	69.00	86.20	.29
5004C"	46.26	1.00	98.00	98.00	.00

5004C"	51.40	.90	.03

LOSSRAT 50.10 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 50.10

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5004D"	3.55	.00	56.00	75.80	.42
5004D"	3.55	1.00	98.00	98.00	.00
5004D"	7.10	.50			.21
5004E	18.62	.00	56.00	75.80	.42
5004E	7.98	1.00	98.00	98.00	.00
5004E	26.60	.30			.29
5005A"	10.20	.00	77.00	92.20	.19
5005A"	1.80	1.00	98.00	98.00	.00
5005A"	12.00	.15			.16
5005B"	32.00	.00	69.00	86.20	.29
5005B"	288.00	1.00	98.00	98.00	.00
5005B"	320.00	.90			.03
5008A"	59.50	.00	77.00	92.20	.19
5008A"	10.50	1.00	98.00	98.00	.00
5008A"	70.00	.15			.16
5008B"	52.00	.00	69.00	86.20	.29
5008B"	468.00	1.00	98.00	98.00	.00
5008B"	520.00	.90			.03
5009	50.23	.00	69.00	86.20	.29
5009	452.07	1.00	98.00	98.00	.00
5009	502.30	.90			.03
5010A	85.39	.00	69.00	86.20	.29
5010A	768.51	1.00	98.00	98.00	.00
5010A	853.90	.90			.03
5010B	47.60	.00	77.00	92.20	.19
5010B	8.40	1.00	98.00	98.00	.00
5010B	56.00	.15			.16
5010C	78.96	.00	69.00	86.20	.29
5010C	315.84	1.00	98.00	98.00	.00
5010C	394.80	.80			.06

LOSSRAT 50.10 WATERSHED 50

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	4826.50
24-HOUR RAIN (INCHES)	=	3.000
LOSS RATE FM (INCHES/HOUR)	=	.062
LOW LOSS FRACTION (Y BAR)	=	.158

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.

LOSSRAT 50.11 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 5011

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5001	4.00	.20	69.00
5002A	9.50	.20	69.00
5002B	9.20	.20	56.00
5003	83.00	.30	56.00
5004A	48.00	.90	56.00
5004B	82.00	.30	56.00
5004C	2.00	.15	65.00
5005A	26.80	.50	56.00
5005B	99.20	.90	56.00
5005C	18.40	.30	56.00
5005D	51.40	.90	69.00
5005E	6.20	.15	65.00
5006A	328.00	.90	69.00
5006B	9.00	.15	77.00
5006C	6.00	.50	69.00
5006D	31.00	.90	56.00
5007A	743.00	.90	69.00
5007B	52.00	.15	77.00
5008	180.00	.90	69.00
5001A'	5.50	.30	56.00
5002A"	4.20	.15	65.00
5002B"	52.70	.30	56.00
5003A"	88.10	.30	56.00
5003B"	29.70	.50	56.00
5003C"	5.20	.15	65.00
5004A"	16.20	.30	69.00
5004B"	22.10	.50	69.00
5004C"	51.40	.90	69.00
5004D"	7.10	.50	56.00
5004E	26.60	.30	56.00
5005A"	12.00	.15	77.00
5005B"	320.00	.90	69.00
5008A"	70.00	.15	77.00
5008B"	520.00	.90	69.00
5009	502.30	.90	69.00
5010A	853.90	.90	69.00
5010B	56.00	.15	77.00
5010C	394.80	.80	69.00
5001D	5.50	.30	69.00
5002D'	2.80	.30	69.00
5002E'	21.00	.50	69.00

LOSSRAT 50.11 WATERSHED 50

LOSS RATE RAW INPUT DATA AT NODE 5011

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	R.C.NO FOR AMC-II
5002F'	10.50	.90	69.00
5003D'	45.80	.90	69.00
5003E'	2.00	.15	77.00
5004D'	124.10	.90	69.00
5004E'	21.00	.15	77.00
5005D'	165.00	.90	69.00
5005E'	14.00	.15	77.00
5011D'	53.20	.80	69.00
5011E'	20.10	.90	69.00
5011F'	280.20	.15	77.00
5001E	5.50	.30	56.00
5002G'	9.90	.90	56.00
5002H'	69.80	.30	56.00
5002I'	26.60	.30	69.00
5002J'	13.10	.50	56.00
5003G'	66.10	.50	56.00
5003H'	5.00	.90	56.00
5003I'	18.40	.50	69.00
5003J'	11.00	.90	69.00
5003K'	16.10	.30	69.00
5004G'	85.10	.50	56.00
5004H'	18.20	.15	77.00
5004I'	130.00	.90	69.00
5004J'	30.70	.90	56.00
5004K'	21.00	.50	69.00
5005G'	384.60	.90	69.00
5005H'	34.90	.15	69.00
5005H'	34.90	.15	69.00
5005I'	2.50	.50	56.00
5006G'	497.50	.90	69.00
5006H'	1.20	.15	77.00
5006I'	42.30	.80	69.00
5011G'	260.30	.80	69.00
5011H'	74.00	.90	69.00
5011I'	9.10	.50	69.00
5011J'	12.00	.15	77.00

LOSSRAT 50.11 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5011

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5001	3.20	.00	69.00	86.20	.29
5001	.80	1.00	98.00	98.00	.00
5001	4.00	.20			.23
5002A	7.60	.00	69.00	86.20	.29
5002A	1.90	1.00	98.00	98.00	.00
5002A	9.50	.20			.23
5002B	7.36	.00	56.00	75.80	.42
5002B	1.84	1.00	98.00	98.00	.00
5002B	9.20	.20			.34
5003	58.10	.00	56.00	75.80	.42
5003	24.90	1.00	98.00	98.00	.00
5003	83.00	.30			.29
5004A	4.80	.00	56.00	75.80	.42
5004A	43.20	1.00	98.00	98.00	.00
5004A	48.00	.90			.04
5004B	57.40	.00	56.00	75.80	.42
5004B	24.60	1.00	98.00	98.00	.00
5004B	82.00	.30			.29
5004C	1.70	.00	65.00	83.00	.31
5004C	.30	1.00	98.00	98.00	.00
5004C	2.00	.15			.27
5005A	13.40	.00	56.00	75.80	.42
5005A	13.40	1.00	98.00	98.00	.00
5005A	26.80	.50			.21
5005B	9.92	.00	56.00	75.80	.42
5005B	89.28	1.00	98.00	98.00	.00
5005B	99.20	.90			.04
5005C	12.88	.00	56.00	75.80	.42
5005C	5.52	1.00	98.00	98.00	.00
5005C	18.40	.30			.29
5005D	5.14	.00	69.00	86.20	.29
5005D	46.26	1.00	98.00	98.00	.00
5005D	51.40	.90			.03
5005E	5.27	.00	65.00	83.00	.31
5005E	.93	1.00	98.00	98.00	.00
5005E	6.20	.15			.27
5006A	32.80	.00	69.00	86.20	.29
5006A	295.20	1.00	98.00	98.00	.00
5006A	328.00	.90			.03
5006B	7.65	.00	77.00	92.20	.19
5006B	1.35	1.00	98.00	98.00	.00

5006B	9.00	.15	.16

LOSSRAT 50.11 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5011

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-ll	RUNOFF CURVE NO. AMC-lll	LOSS RATE FM (IN/HR)
5006C	3.00	.00	69.00	86.20	.29
5006C	3.00	1.00	98.00	98.00	.00
5006C	6.00	.50			.14
5006D	3.10	.00	56.00	75.80	.42
5006D	27.90	1.00	98.00	98.00	.00
5006D	31.00	.90			.04
5007A	74.30	.00	69.00	86.20	.29
5007A	668.70	1.00	98.00	98.00	.00
5007A	743.00	.90			.03
5007B	44.20	.00	77.00	92.20	.19
5007B	7.80	1.00	98.00	98.00	.00
5007B	52.00	.15			.16
5008	18.00	.00	69.00	86.20	.29
5008	162.00	1.00	98.00	98.00	.00
5008	180.00	.90			.03
5001A'	3.85	.00	56.00	75.80	.42
5001A'	1.65	1.00	98.00	98.00	.00
5001A'	5.50	.30			.29
5002A"	3.57	.00	65.00	83.00	.31
5002A"	.63	1.00	98.00	98.00	.00
5002A"	4.20	.15			.27
5002B"	36.89	.00	56.00	75.80	.42
5002B"	15.81	1.00	98.00	98.00	.00
5002B"	52.70	.30			.29
5003A"	61.67	.00	56.00	75.80	.42
5003A"	26.43	1.00	98.00	98.00	.00
5003A"	88.10	.30			.29
5003B"	14.85	.00	56.00	75.80	.42
5003B"	14.85	1.00	98.00	98.00	.00
5003B"	29.70	.50			.21
5003C"	4.42	.00	65.00	83.00	.31
5003C"	.78	1.00	98.00	98.00	.00
5003C"	5.20	.15			.27
5004A"	11.34	.00	69.00	86.20	.29
5004A"	4.86	1.00	98.00	98.00	.00
5004A"	16.20	.30			.20
5004B"	11.05	.00	69.00	86.20	.29
5004B"	11.05	1.00	98.00	98.00	.00
5004B"	22.10	.50			.14
5004C"	5.14	.00	69.00	86.20	.29
5004C"	46.26	1.00	98.00	98.00	.00

5004C"	51.40	.90		.03

LOSSRAT 50.11 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5011

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-ll	RUNOFF CURVE NO. AMC-lll	LOSS RATE FM (IN/HR)
5004D"	3.55	.00	56.00	75.80	.42
5004D"	3.55	1.00	98.00	98.00	.00
5004D"	7.10	.50			.21
5004E	18.62	.00	56.00	75.80	.42
5004E	7.98	1.00	98.00	98.00	.00
5004E	26.60	.30			.29
5005A"	10.20	.00	77.00	92.20	.19
5005A"	1.80	1.00	98.00	98.00	.00
5005A"	12.00	.15			.16
5005B"	32.00	.00	69.00	86.20	.29
5005B"	288.00	1.00	98.00	98.00	.00
5005B"	320.00	.90			.03
5008A"	59.50	.00	77.00	92.20	.19
5008A"	10.50	1.00	98.00	98.00	.00
5008A"	70.00	.15			.16
5008B"	52.00	.00	69.00	86.20	.29
5008B"	468.00	1.00	98.00	98.00	.00
5008B"	520.00	.90			.03
5009	50.23	.00	69.00	86.20	.29
5009	452.07	1.00	98.00	98.00	.00
5009	502.30	.90			.03
5010A	85.39	.00	69.00	86.20	.29
5010A	768.51	1.00	98.00	98.00	.00
5010A	853.90	.90			.03
5010B	47.60	.00	77.00	92.20	.19
5010B	8.40	1.00	98.00	98.00	.00
5010B	56.00	.15			.16
5010C	78.96	.00	69.00	86.20	.29
5010C	315.84	1.00	98.00	98.00	.00
5010C	394.80	.80			.06
5001D	3.85	.00	69.00	86.20	.29
5001D	1.65	1.00	98.00	98.00	.00
5001D	5.50	.30			.20
5002D'	1.96	.00	69.00	86.20	.29
5002D'	.84	1.00	98.00	98.00	.00
5002D'	2.80	.30			.20
5002E'	10.50	.00	69.00	86.20	.29
5002E'	10.50	1.00	98.00	98.00	.00
5002E'	21.00	.50			.14
5002F'	1.05	.00	69.00	86.20	.29
5002F'	9.45	1.00	98.00	98.00	.00

5002F'	10.50	.90	.03

LOSSRAT 50.11 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5011

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5003D'	4.58	.00	69.00	86.20	.29
5003D'	41.22	1.00	98.00	98.00	.00
5003D'	45.80	.90			.03
5003E'	1.70	.00	77.00	92.20	.19
5003E'	.30	1.00	98.00	98.00	.00
5003E'	2.00	.15			.16
5004D'	12.41	.00	69.00	86.20	.29
5004D'	111.69	1.00	98.00	98.00	.00
5004D'	124.10	.90			.03
5004E'	17.85	.00	77.00	92.20	.19
5004E'	3.15	1.00	98.00	98.00	.00
5004E'	21.00	.15			.16
5005D'	16.50	.00	69.00	86.20	.29
5005D'	148.50	1.00	98.00	98.00	.00
5005D'	165.00	.90			.03
5005E'	11.90	.00	77.00	92.20	.19
5005E'	2.10	1.00	98.00	98.00	.00
5005E'	14.00	.15			.16
5011D'	10.64	.00	69.00	86.20	.29
5011D'	42.56	1.00	98.00	98.00	.00
5011D'	53.20	.80			.06
5011E'	2.01	.00	69.00	86.20	.29
5011E'	18.09	1.00	98.00	98.00	.00
5011E'	20.10	.90			.03
5011F'	238.17	.00	77.00	92.20	.19
5011F'	42.03	1.00	98.00	98.00	.00
5011F'	280.20	.15			.16
5001E	3.85	.00	56.00	75.80	.42
5001E	1.65	1.00	98.00	98.00	.00
5001E	5.50	.30			.29
5002G'	.99	.00	56.00	75.80	.42
5002G'	8.91	1.00	98.00	98.00	.00
5002G'	9.90	.90			.04
5002H'	48.86	.00	56.00	75.80	.42
5002H'	20.94	1.00	98.00	98.00	.00
5002H'	69.80	.30			.29
5002I'	18.62	.00	69.00	86.20	.29
5002I'	7.98	1.00	98.00	98.00	.00
5002I'	26.60	.30			.20
5002J'	6.55	.00	56.00	75.80	.42
5002J'	6.55	1.00	98.00	98.00	.00

5002J'	13.10	.50	.21

LOSSRAT 50.11 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5011

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5003G'	33.05	.00	56.00	75.80	.42
5003G'	33.05	1.00	98.00	98.00	.00
5003G'	66.10	.50			.21
5003H'	.50	.00	56.00	75.80	.42
5003H'	4.50	1.00	98.00	98.00	.00
5003H'	5.00	.90			.04
5003I'	9.20	.00	69.00	86.20	.29
5003I'	9.20	1.00	98.00	98.00	.00
5003I'	18.40	.50			.14
5003J'	1.10	.00	69.00	86.20	.29
5003J'	9.90	1.00	98.00	98.00	.00
5003J'	11.00	.90			.03
5003K'	11.27	.00	69.00	86.20	.29
5003K'	4.83	1.00	98.00	98.00	.00
5003K'	16.10	.30			.20
5004G'	42.55	.00	56.00	75.80	.42
5004G'	42.55	1.00	98.00	98.00	.00
5004G'	85.10	.50			.21
5004H'	15.47	.00	77.00	92.20	.19
5004H'	2.73	1.00	98.00	98.00	.00
5004H'	18.20	.15			.16
5004I'	13.00	.00	69.00	86.20	.29
5004I'	117.00	1.00	98.00	98.00	.00
5004I'	130.00	.90			.03
5004J'	3.07	.00	56.00	75.80	.42
5004J'	27.63	1.00	98.00	98.00	.00
5004J'	30.70	.90			.04
5004K'	10.50	.00	69.00	86.20	.29
5004K'	10.50	1.00	98.00	98.00	.00
5004K'	21.00	.50			.14
5005G'	38.46	.00	69.00	86.20	.29
5005G'	346.14	1.00	98.00	98.00	.00
5005G'	384.60	.90			.03
5005H'	29.67	.00	69.00	86.20	.29
5005H'	5.24	1.00	98.00	98.00	.00
5005H'	34.90	.15			.24
5005H'	29.67	.00	69.00	86.20	.29
5005H'	5.24	1.00	98.00	98.00	.00
5005H'	34.90	.15			.24
50051'	1.25	.00	56.00	75.80	.42
50051'	1.25	1.00	98.00	98.00	.00

50051'	2.50	.50	.21

LOSSRAT 50.11 WATERSHED 50

LOSS RATE PROCESSED INPUT DATA AT NODE 5011

SUBAREA IDENTIFICATION	SUBAREA COMPONENT (ACRES)	IMPERVIOUS FRACT	RUNOFF CURVE NO. AMC-II	RUNOFF CURVE NO. AMC-III	LOSS RATE FM (IN/HR)
5006G'	49.75	.00	69.00	86.20	.29
5006G'	447.75	1.00	98.00	98.00	.00
5006G'	497.50	.90			.03
5006H'	1.02	.00	77.00	92.20	.19
5006H'	.18	1.00	98.00	98.00	.00
5006H'	1.20	.15			.16
5006I'	8.46	.00	69.00	86.20	.29
5006I'	33.84	1.00	98.00	98.00	.00
5006I'	42.30	.80			.06
5011G'	52.06	.00	69.00	86.20	.29
5011G'	208.24	1.00	98.00	98.00	.00
5011G'	260.30	.80			.06
5011H'	7.40	.00	69.00	86.20	.29
5011H'	66.60	1.00	98.00	98.00	.00
5011H'	74.00	.90			.03
5011I'	4.55	.00	69.00	86.20	.29
5011I'	4.55	1.00	98.00	98.00	.00
5011I'	9.10	.50			.14
5011J'	10.20	.00	77.00	92.20	.19
5011J'	1.80	1.00	98.00	98.00	.00
5011J'	12.00	.15			.16

LOSSRAT 50.11 WATERSHED 50

RETURN FREQUENCY (YEARS)	=	100.00
ANTECEDENT MOISTURE CONDITION	=	3.00
DRAINAGE AREA (ACRES)	=	7471.50
24-HOUR RAIN (INCHES)	=	3.000
LOSS RATE FM (INCHES/HOUR)	=	.069
LOW LOSS FRACTION (Y BAR)	=	.165

THESE RESULTS ARE BASED ON THE COMPUTER MODEL " LOSS RATE CALCULATOR (1.2)" DEVELOPED BY RIVERTECH. IT CALCULATES LOSS RATE PARAMETERS IN SAN BERNARDINO COUNTY.