

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 BODR 2022 - NODE 133C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV JULY 2023 ROKAMOTO \*

FILE NAME: EV0033CC.DAT
TIME/DATE OF STUDY: 15:20 07/05/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.579
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.252 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.323
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
          DATA PAIR          Qcenter          Qpass
          NUMBER              (CFS)              (CFS)
          -                   0.00              0.00
          1                   25.00             13.59
          2                   75.00             16.84
          3                   100.00            18.46
          4                   250.00            28.22
          5                   550.00            47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
          INTERVAL          DEPTH          OUTFLOW          STORAGE
          NUMBER            (FT)            (CFS)            (AF)
          1                 0.00             0.00             0.000
          2                 1.00             0.01             0.310
          3                 2.00             0.83             1.240
          4                 3.00             5.60             2.600
          5                 4.00             16.88            4.130
          6                 5.00             23.48            5.790
          7                 6.00             36.73            7.560
          8                 7.00             55.95            9.440
          9                 8.00             78.70           11.430
          10                9.00            228.67           12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.610 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.363  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0033CC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	19223.4
18.000					
119.00	12603.00		Convex Routing: Stream #1	19223.4	19085.2
18.000					
810.00	809.00		Subarea (UH) Added to Stream #2	0.0	117.9
16.250					
809.00	12603.00		Flow-Through Basin: Stream #2	117.9	71.8
16.417	14.01				
12603.00	12603.00		Stream #2 Added to: Stream #1	19085.2	19124.9
18.000					
12603.00	12603.00		Zero Out: Stream #2	71.8	0.0
12603.00	126.00		Convex Routing: Stream #1	19124.9	19107.7
18.083					
920.00	905.00		Subarea (UH) Added to Stream #2	0.0	312.6
16.250					
905.00	126.00		Flow-Through Basin: Stream #2	312.6	247.4
16.417	19.67				
126.00	126.00		Stream #2 Added to: Stream #1	19107.7	19206.3
18.083					
126.00	126.00		Zero Out: Stream #2	247.4	0.0
600.00	126.00		Subarea (UH) Added to Stream #2	0.0	93.3
16.333					
126.00	126.00		Stream #2 Added to: Stream #1	19206.3	19225.5
18.083					
126.00	126.00		Zero Out: Stream #2	93.3	0.0
126.00	12720.50		Convex Routing: Stream #1	19225.5	19215.0
18.167					
320.00	331.00		Subarea (UH) Added to Stream #2	0.0	440.6
16.333					
400.00	331.00		Subarea (UH) Added to Stream #3	0.0	288.6
16.333					
390.00	331.00		Subarea (UH) Added to Stream #4	0.0	51.0
16.417					
331.00	331.00		Stream #4 Added to: Stream #2	440.6	487.7
16.333					

331.00	331.00		Zero Out: Stream #4	51.0	0.0
331.00	331.00		Stream #3 Added to: Stream #2	487.7	776.3
16.333					
331.00	331.00		Zero Out: Stream #3	288.6	0.0
331.00	331.00		Flow-Through Basin: Stream #2	776.3	547.9
16.500	76.17				
331.00	12720.50		Stream #2 Added to: Stream #1	19215.0	19542.0
18.167					
12720.50	12720.50		Zero Out: Stream #2	547.9	0.0
12720.50	127.00		Convex Routing: Stream #1	19542.0	19506.4
18.250					
12710.00	127.00		Subarea (UH) Added to Stream #2	0.0	260.8
16.500					
127.00	127.00		Stream #2 Added to: Stream #1	19506.4	19588.7
18.250					
127.00	127.00		Zero Out: Stream #2	260.8	0.0
50150.00	127.00		Subarea (UH) Added to Stream #2	0.0	451.4
16.417					
127.00	127.00		Stream #2 Added to: Stream #1	19588.7	19774.8
17.250					
127.00	127.00		Zero Out: Stream #2	451.4	0.0
127.00	129.00		Convex Routing: Stream #1	19774.8	19767.2
17.417					
50300.00	129.00		Subarea (UH) Added to Stream #2	0.0	251.3
16.417					
129.00	129.00		Stream #2 Added to: Stream #1	19767.2	19882.6
17.417					
129.00	129.00		Zero Out: Stream #2	251.3	0.0
210.00	221.00		Subarea (UH) Added to Stream #2	0.0	133.2
16.333					
221.00	221.00		Flowby Basin Model: Stream #2	133.2	20.6
16.333					
221.00	223.00		Flow-Through Basin: Stream #2	20.6	16.5
17.250	4.08				
221.00	222.00		Flow-Through Basin: Stream #5	112.6	38.0
17.500	17.02				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0033CC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     |UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 16.5    54.5|
17.417 | |
| 222.00    222.00| Zero Out: Stream #5| 38.0    0.0|
| |
| 222.00    129.00| Stream #2 Added to: Stream #1| 19882.6 19937.1|
17.417 | |
| 129.00    129.00| Zero Out: Stream #2| 54.5    0.0|
| |
| 129.00    133.00| Convex Routing: Stream #1| 19937.1 19926.4|
17.500 | |
-----+-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0    1571.5|
16.833 | |
| 132.00    132.00| Flowby Basin Model: Stream #2| 1571.5 1349.8|
16.833 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 221.7   206.5|
17.083 | 21.51|
| 132.00    132.00| Split Hydrograph: Stream #3| 206.5   103.3|
17.083 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 103.3   21.9|
18.917 | 14.56|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to: Stream #2| 1349.8 1365.1|
16.833 | |
| 132.00    132.00| Zero Out: Stream #3| 21.9    0.0|
| |
| 132.00    132.00| Flow-Through Basin: Stream #4| 103.3   22.0|
18.917 | 14.70|
| 132.00    132.00| Stream #4 Added to: Stream #2| 1365.1 1379.9|
16.833 | |
| 132.00    132.00| Zero Out: Stream #4| 22.0    0.0|
| |
-----+-----+-----+-----+
| 132.00    13305.00| Convex Routing: Stream #2| 1379.9 1343.5|
17.333 | |
| 13305.00  133.00| Convex Routing: Stream #2| 1343.5 1331.5|
17.500 | |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0    677.7|
16.667 | |
| 133.00    133.00| Stream #3 Added to: Stream #2| 1331.5 1831.3|
17.500 | |

```

	133.00	133.00	Zero Out:	Stream #3	677.7	0.0
+-----+-----+-----+-----+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	19926.4	21757.7
17.500						
	133.00	133.00	Zero Out:	Stream #2	1831.3	0.0
	133.00	133.00	View:	Stream #1		21757.7
17.500		17927.95	3			
+-----+-----+-----+-----+-----+						
-----+-----+-----+-----+-----+						
	Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT					
	INTERVAL					
	3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF					
	THE DESIGN STORM					
+-----+-----+-----+-----+-----+						
-----+-----+-----+-----+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV OCT 2022 ROKAMOTO \*

FILE NAME: EV0033TC.DAT
TIME/DATE OF STUDY: 15:35 10/25/2022

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<<

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qenter (CFS), Qpass (CFS). Rows include values for 1 and 2.

Table with 3 columns: Node, Value 1, Value 2. Rows 3, 4, 5.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 5.700
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-9.

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1  
-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400
3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900

11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00  
CHANNEL LENGTH (FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.556 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.363
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

Table with columns: TIME (2) TO, NODE #, PEAK (HR), UPSTREAM, DOWNSTREAM, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), FOOTNOTES. Includes summary of stream operations and peak flow data.

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT  
INTERVAL |  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF  
THE DESIGN STORM |

+-----+  
-----+

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 BODR 2022 - NODE 133U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV JULY 2023 ROKAMOTO \*

FILE NAME: EV0033UC.DAT
TIME/DATE OF STUDY: 15:22 07/05/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.579
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.252 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.323
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

   INTERVAL   DEPTH   OUTFLOW   STORAGE
   NUMBER     (FT)   (CFS)     (AF)
   -----
1           0.00     0.00     0.000
2           1.00     1.84     0.260
3           2.00     3.22     1.160
4           3.00     4.16     2.520
5           4.00     4.94     3.990
6           5.00     5.60     5.550
7           6.00     7.17     7.200
8           7.00    14.13    8.950
9           8.00    18.54   10.800
10          9.00    21.90   12.740
11         10.00    24.73   14.750
12         11.00    37.17   16.920
13         12.00    57.63   19.160
14         13.00    83.32   21.500
15         14.00   112.96   23.940
16         15.00   133.28   26.480
17         16.00   144.34   29.150
18         17.00   154.45   31.950
19         18.00   163.94   34.870
20         19.00   172.92   37.940
21         20.00   181.39   41.140
22         21.00   189.45   44.500
23         22.00   197.22   48.010
24         23.00   466.70   51.740
25         24.00   951.81   53.820
-----
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0033UC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	19714.9
18.000					
119.00	12603.00		Convex Routing: Stream #1	19714.9	19567.5
18.000					
810.00	809.00		Subarea (UH) Added to Stream #2	0.0	125.7
16.250					
809.00	12603.00		Flow-Through Basin: Stream #2	125.7	75.8
16.417	14.14				
12603.00	12603.00		Stream #2 Added to: Stream #1	19567.5	19607.1
18.000					
12603.00	12603.00		Zero Out: Stream #2	75.8	0.0
12603.00	126.00		Convex Routing: Stream #1	19607.1	19586.1
18.083					
920.00	905.00		Subarea (UH) Added to Stream #2	0.0	334.1
16.250					
905.00	126.00		Flow-Through Basin: Stream #2	334.1	266.5
16.417	19.86				
126.00	126.00		Stream #2 Added to: Stream #1	19586.1	19682.9
18.083					
126.00	126.00		Zero Out: Stream #2	266.5	0.0
600.00	126.00		Subarea (UH) Added to Stream #2	0.0	100.7
16.333					
126.00	126.00		Stream #2 Added to: Stream #1	19682.9	19701.8
18.083					
126.00	126.00		Zero Out: Stream #2	100.7	0.0
126.00	12720.50		Convex Routing: Stream #1	19701.8	19690.0
18.167					
320.00	331.00		Subarea (UH) Added to Stream #2	0.0	465.7
16.333					
400.00	331.00		Subarea (UH) Added to Stream #3	0.0	306.1
16.333					
390.00	331.00		Subarea (UH) Added to Stream #4	0.0	54.3
16.417					
331.00	331.00		Stream #4 Added to: Stream #2	465.7	515.7
16.333					

331.00	331.00	Zero Out:	Stream #4	54.3	0.0
331.00	331.00	Stream #3 Added to:	Stream #2	515.7	821.8
16.333					
331.00	331.00	Zero Out:	Stream #3	306.1	0.0
331.00	331.00	Flow-Through Basin:	Stream #2	821.8	572.4
16.500	77.10				
331.00	12720.50	Stream #2 Added to:	Stream #1	19690.0	20015.1
18.167					
12720.50	12720.50	Zero Out:	Stream #2	572.4	0.0
12720.50	127.00	Convex Routing:	Stream #1	20015.1	19974.5
18.250					
12710.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	278.5
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	19974.5	20055.3
18.250					
127.00	127.00	Zero Out:	Stream #2	278.5	0.0
50150.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	480.6
16.417					
127.00	127.00	Stream #2 Added to:	Stream #1	20055.3	20203.2
18.250					
127.00	127.00	Zero Out:	Stream #2	480.6	0.0
127.00	129.00	Convex Routing:	Stream #1	20203.2	20190.2
18.333					
50300.00	129.00	Subarea (UH) Added to:	Stream #2	0.0	268.7
16.417					
129.00	129.00	Stream #2 Added to:	Stream #1	20190.2	20289.8
17.417					
129.00	129.00	Zero Out:	Stream #2	268.7	0.0
210.00	221.00	Subarea (UH) Added to:	Stream #2	0.0	141.3
16.333					
221.00	221.00	Flowby Basin Model:	Stream #2	141.3	21.1
16.333					
221.00	223.00	Flow-Through Basin:	Stream #2	21.1	16.6
17.250	4.10				
221.00	222.00	Flow-Through Basin:	Stream #5	120.1	40.3
17.417	17.27				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+
-----+
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0033UC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|      16.6      56.9|
17.417 |                |
| 222.00    222.00| Zero Out:           Stream #5|      40.3      0.0|
|                |
| 222.00    129.00| Stream #2 Added to:  Stream #1| 20289.8    20346.7|
17.417 |                |
| 129.00    129.00| Zero Out:           Stream #2|      56.9      0.0|
|                |
| 129.00    133.00| Convex Routing:     Stream #1| 20346.7    20337.2|
17.500 |                |
-----+-----+-----+-----+
| 133.00    133.00| View:               Stream #1|                20337.2|
17.500 | 16777.62| 3 |
-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
|
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
|
-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV JULY 2023 ROKAMOTO \*

FILE NAME: EV0034CC.DAT
TIME/DATE OF STUDY: 15:18 07/05/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.579
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.252 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.323
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.610 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.363  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.353 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.412  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 1.252 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.408  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0034CC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	0.0	18838.6
18.000			
119.00	12603.00	18838.6	18705.5
18.000			
810.00	809.00	0.0	112.5
16.250			
809.00	12603.00	112.5	68.8
16.417	13.92		
12603.00	12603.00	18705.5	18745.4
18.000			
12603.00	12603.00	68.8	0.0
12603.00	126.00	18745.4	18731.2
18.083			
920.00	905.00	0.0	297.6
16.250			
905.00	126.00	297.6	234.8
16.417	19.53		
126.00	126.00	18731.2	18831.3
18.083			
126.00	126.00	234.8	0.0
600.00	126.00	0.0	88.2
16.333			
126.00	126.00	18831.3	18850.9
18.083			
126.00	126.00	88.2	0.0
126.00	12720.50	18850.9	18840.6
18.167			
320.00	331.00	0.0	423.2
16.333			
400.00	331.00	0.0	276.5
16.333			
390.00	331.00	0.0	48.8
16.417			
331.00	331.00	423.2	468.3
16.333			

331.00	331.00	Zero Out:	Stream #4	48.8	0.0
16.333					
331.00	331.00	Zero Out:	Stream #3	276.5	0.0
16.333					
331.00	331.00	Flow-Through Basin:	Stream #2	744.8	530.1
16.500	75.51				
331.00	12720.50	Stream #2 Added to:	Stream #1	18840.6	19169.6
18.167					
12720.50	12720.50	Zero Out:	Stream #2	530.1	0.0
12720.50	127.00	Convex Routing:	Stream #1	19169.6	19137.5
18.250					
12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	248.3
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	19137.5	19221.1
18.250					
127.00	127.00	Zero Out:	Stream #2	248.3	0.0
50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	430.5
16.417					
127.00	127.00	Stream #2 Added to:	Stream #1	19221.1	19458.3
17.250					
127.00	127.00	Zero Out:	Stream #2	430.5	0.0
127.00	129.00	Convex Routing:	Stream #1	19458.3	19444.9
17.417					
50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	239.2
16.417					
129.00	129.00	Stream #2 Added to:	Stream #1	19444.9	19560.7
17.333					
129.00	129.00	Zero Out:	Stream #2	239.2	0.0
210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	127.6
16.333					
221.00	221.00	Flowby Basin Model:	Stream #2	127.6	20.3
16.333					
221.00	223.00	Flow-Through Basin:	Stream #2	20.3	16.4
17.250	4.07				
221.00	222.00	Flow-Through Basin:	Stream #5	107.3	36.6
17.500	16.82				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0034CC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     |UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 16.4    52.9|
17.500 | |
| 222.00    222.00| Zero Out: Stream #5| 36.6    0.0|
| |
| 222.00    129.00| Stream #2 Added to: Stream #1| 19560.7 19613.3|
17.333 | |
| 129.00    129.00| Zero Out: Stream #2| 52.9    0.0|
| |
| 129.00    133.00| Convex Routing: Stream #1| 19613.3 19606.3|
17.417 | |
-----+-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0    1508.6|
16.833 | |
| 132.00    132.00| Flowby Basin Model: Stream #2| 1508.6 1298.9|
16.833 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 209.7   195.6|
17.083 | 21.33|
| 132.00    132.00| Split Hydrograph: Stream #3| 195.6   97.8|
17.083 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 97.8    21.6|
18.917 | 13.95|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to: Stream #2| 1298.9 1313.9|
16.833 | |
| 132.00    132.00| Zero Out: Stream #3| 21.6    0.0|
| |
| 132.00    132.00| Flow-Through Basin: Stream #4| 97.8    21.6|
18.917 | 14.10|
| 132.00    132.00| Stream #4 Added to: Stream #2| 1313.9 1328.2|
16.833 | |
| 132.00    132.00| Zero Out: Stream #4| 21.6    0.0|
| |
-----+-----+-----+-----+
| 132.00    13305.00| Convex Routing: Stream #2| 1328.2 1296.4|
17.333 | |
| 13305.00  133.00| Convex Routing: Stream #2| 1296.4 1282.8|
17.583 | |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0    653.3|
16.667 | |
| 133.00    133.00| Stream #3 Added to: Stream #2| 1282.8 1776.8|
17.500 | |

```

	133.00	133.00	Zero Out:	Stream #3	653.3	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	19606.3	21380.3
17.417						
	133.00	133.00	Zero Out:	Stream #2	1776.8	0.0
	133.00	134.00	Convex Routing:	Stream #1	21380.3	21364.5
17.583						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	758.2
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	21364.5	21733.1
17.583						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	758.2	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	1187.6
17.250						
	134.00	134.00	Stream #2 Added to:	Stream #1	21733.1	22883.7
17.583						
	134.00	134.00	Zero Out:	Stream #2	1187.6	0.0
	134.00	134.00	View:	Stream #1		22883.7
17.583		19009.96	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV JULY 2023 ROKAMOTO \*

FILE NAME: EV0034UC.DAT
TIME/DATE OF STUDY: 15:19 07/05/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.579
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.252 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.323
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL  DEPTH  OUTFLOW  STORAGE
NUMBER    (FT)   (CFS)    (AF)
-----
1         0.00    0.00     0.000
2         1.00    1.84     0.260
3         2.00    3.22     1.160
4         3.00    4.16     2.520
5         4.00    4.94     3.990
6         5.00    5.60     5.550
7         6.00    7.17     7.200
8         7.00   14.13    8.950
9         8.00   18.54   10.800
10        9.00   21.90   12.740
11       10.00   24.73   14.750
12       11.00   37.17   16.920
13       12.00   57.63   19.160
14       13.00   83.32   21.500
15       14.00  112.96   23.940
16       15.00  133.28   26.480
17       16.00  144.34   29.150
18       17.00  154.45   31.950
19       18.00  163.94   34.870
20       19.00  172.92   37.940
21       20.00  181.39   41.140
22       21.00  189.45   44.500
23       22.00  197.22   48.010
24       23.00  466.70   51.740
25       24.00  951.81   53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.610 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.363  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.353 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

Table with columns: TIME (2) TO, NODE #, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), MODELED (AF), FOOTNOTES. Includes summary header: \* AES FLOODSCx PROGRAM RESULTS SUMMARY \* and various data rows for different stream nodes and processes.

	331.00	331.00	Zero Out:	Stream #4	50.2	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	480.6	765.0
16.333						
	331.00	331.00	Zero Out:	Stream #3	284.4	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	765.0	541.8
16.500		75.94				
	331.00	12720.50	Stream #2 Added to:	Stream #1	19099.1	19426.7
18.167						
	12720.50	12720.50	Zero Out:	Stream #2	541.8	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	19426.7	19391.8
18.250						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	256.4
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	19391.8	19474.5
18.250						
	127.00	127.00	Zero Out:	Stream #2	256.4	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	444.1
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	19474.5	19680.2
17.250						
	127.00	127.00	Zero Out:	Stream #2	444.1	0.0
	127.00	129.00	Convex Routing:	Stream #1	19680.2	19671.1
17.417						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	247.0
16.417						
	129.00	129.00	Stream #2 Added to:	Stream #1	19671.1	19786.1
17.417						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	247.0	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	131.2
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	131.2	20.5
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	20.5	16.5
17.250		4.07				
	221.00	222.00	Flow-Through Basin:	Stream #5	110.7	37.5
17.500		16.96				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0034UC.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
223.00 17.417	222.00	Stream #5 Added to: Stream #2	16.5	53.9
222.00	222.00	Zero Out: Stream #5	37.5	0.0
222.00 17.417	129.00	Stream #2 Added to: Stream #1	19786.1	19839.9
129.00	129.00	Zero Out: Stream #2	53.9	0.0
129.00 17.500	133.00	Convex Routing: Stream #1	19839.9	19828.8
13010.00 16.833	132.00	Subarea (UH) Added to Stream #2	0.0	1550.2
132.00 16.833	132.00	Flowby Basin Model: Stream #2	1550.2	1332.6
132.00 17.083	132.00 21.45	Flow-Through Basin: Stream #3	217.6	202.9
132.00 17.083	132.00	Split Hydrograph: Stream #3	202.9	101.4
132.00 18.917	132.00 14.37	Flow-Through Basin: Stream #3	101.4	21.8
132.00 16.833	132.00	Stream #3 Added to: Stream #2	1332.6	1347.8
132.00	132.00	Zero Out: Stream #3	21.8	0.0
132.00 18.917	132.00 14.51	Flow-Through Basin: Stream #4	101.4	21.9
132.00 16.833	132.00	Stream #4 Added to: Stream #2	1347.8	1362.5
132.00	132.00	Zero Out: Stream #4	21.9	0.0
132.00 17.333	13305.00	Convex Routing: Stream #2	1362.5	1328.0
13305.00 17.500	133.00	Convex Routing: Stream #2	1328.0	1314.7
132.00 16.667	133.00	Subarea (UH) Added to Stream #3	0.0	669.4
133.00 17.500	133.00	Stream #3 Added to: Stream #2	1314.7	1813.1

133.00	133.00	Zero Out:	Stream #3	669.4	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	19828.8	21641.9
17.500	133.00	Zero Out:	Stream #2	1813.1	0.0
133.00	134.00	Convex Routing:	Stream #1	21641.9	21624.7
17.583	133.00	Subarea (UH) Added to	Stream #2	0.0	780.5
16.417	134.00	Stream #2 Added to:	Stream #1	21624.7	21991.8
17.583	134.00	Zero Out:	Stream #2	780.5	0.0
134.00	134.00	View:	Stream #1	21991.8	
17.583	18273.66	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 BODR 2022 - NODE 126 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV00126C.DAT
TIME/DATE OF STUDY: 07:20 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

=====

-----+-----

-----+-----

| \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

| INPUT FILENAME: [EV00126C.DAT ]

Page: 1 of |

-----+-----

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
-------------------	---------------------	--------------	------------------------------	---------------------	-----------------------

10100.00	119.00	18.000	Subarea (UH) Added to Stream #1	0.0	20065.4
119.00	12603.00	18.000	Convex Routing: Stream #1	20065.4	19912.0
810.00	809.00	16.250	Subarea (UH) Added to Stream #2	0.0	130.8
809.00	12603.00	16.417	Flow-Through Basin: Stream #2	130.8	78.6
12603.00	12603.00	18.000	Stream #2 Added to: Stream #1	19912.0	19951.5

12603.00	12603.00	18.083	Zero Out: Stream #2	78.6	0.0
12603.00	126.00	16.250	Convex Routing: Stream #1	19951.5	19928.3
920.00	905.00	16.250	Subarea (UH) Added to Stream #2	0.0	348.3
905.00	126.00	16.417	Flow-Through Basin: Stream #2	348.3	278.4
126.00	126.00	18.083	Stream #2 Added to: Stream #1	19928.3	20024.2

126.00	126.00	16.333	Zero Out: Stream #2	278.4	0.0
600.00	126.00	18.083	Subarea (UH) Added to Stream #2	0.0	105.7
126.00	126.00	18.083	Stream #2 Added to: Stream #1	20024.2	20042.8
126.00	126.00	18.083	Zero Out: Stream #2	105.7	0.0
126.00	126.00	18.083	View: Stream #1		20042.8

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

-----+-----

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 BODR 2022 - NODE 127 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV00127C.DAT
TIME/DATE OF STUDY: 07:19 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 11
=====
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV00127C.DAT ]
Page: 1 of 1
-----+-----
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
-----+-----
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0    19781.2|
18.000 |                                     |
| 119.00     12603.00| Convex Routing:      Stream #1| 19781.2    19632.3|
18.000 |                                     |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0     126.7|
16.250 |                                     |
| 809.00     12603.00| Flow-Through Basin: Stream #2| 126.7      76.3|
16.417 | 14.15|                                     |
| 12603.00   12603.00| Stream #2 Added to: Stream #1| 19632.3    19671.9|
18.000 |                                     |
-----+-----
| 12603.00   12603.00| Zero Out:           Stream #2|      76.3     0.0|
|                                     |
| 12603.00   126.00| Convex Routing:      Stream #1| 19671.9    19650.6|
18.083 |                                     |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0     336.9|
16.250 |                                     |
| 905.00     126.00| Flow-Through Basin: Stream #2| 336.9      268.8|
16.417 | 19.88|                                     |
| 126.00     126.00| Stream #2 Added to: Stream #1| 19650.6    19747.2|
18.083 |                                     |
-----+-----
| 126.00     126.00| Zero Out:           Stream #2| 268.8      0.0|
|                                     |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0     101.7|
16.333 |                                     |
| 126.00     126.00| Stream #2 Added to: Stream #1| 19747.2    19766.0|
18.083 |                                     |
| 126.00     126.00| Zero Out:           Stream #2| 101.7      0.0|
|                                     |
| 126.00     12720.50| Convex Routing:      Stream #1| 19766.0    19753.8|
18.167 |                                     |
-----+-----
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0     469.0|
16.333 |                                     |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0     308.4|
16.333 |                                     |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0      54.7|
16.417 |                                     |
| 331.00     331.00| Stream #4 Added to: Stream #2| 469.0      519.4|
16.333 |                                     |

```

	331.00	331.00	Zero Out:	Stream #4	54.7	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	519.4	827.8
16.333						
	331.00	331.00	Zero Out:	Stream #3	308.4	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	827.8	575.6
16.500		77.22				
	331.00	12720.50	Stream #2 Added to:	Stream #1	19753.8	20078.7
18.167						
	12720.50	12720.50	Zero Out:	Stream #2	575.6	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	20078.7	20037.3
18.250						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	280.8
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	20037.3	20118.0
18.250						
	127.00	127.00	Zero Out:	Stream #2	280.8	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	484.5
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	20118.0	20265.5
18.250						
	127.00	127.00	Zero Out:	Stream #2	484.5	0.0
	127.00	127.00	View:	Stream #1		20265.5
18.250		16640.60	3			
+-----+						
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL						
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM						
+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV JULY 2023 ROKAMOTO \*

FILE NAME: EV00137C.DAT
TIME/DATE OF STUDY: 15:17 07/05/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.579
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.252 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.323
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.610 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.363  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.353 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.252 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.408
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.390 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.421
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 11  
=====

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

```
-----+-----+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV00137C.DAT ]
| Page: 1 of |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM| |
| TIME (2) TO | MAX. STORAGE|                                     |                                     |
| NODE #      NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
| PEAK (HR)   | MODELED (AF)| FOOTNOTES |                                     |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0   18754.2|
18.000 |                                     |                                     |
| 119.00     12603.00| Convex Routing:      Stream #1| 18754.2   18622.0|
18.000 |                                     |                                     |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0    111.5|
16.250 |                                     |                                     |
| 809.00     12603.00| Flow-Through Basin: Stream #2| 111.5     68.2|
16.417 | 13.91|                                     |                                     |
| 12603.00   12603.00| Stream #2 Added to: Stream #1| 18622.0   18662.0|
18.000 |                                     |                                     |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 12603.00   12603.00| Zero Out:           Stream #2|      68.2     0.0|
|                                     |                                     |
| 12603.00   126.00| Convex Routing:     Stream #1| 18662.0   18648.0|
18.083 |                                     |                                     |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0    294.9|
16.250 |                                     |                                     |
| 905.00     126.00| Flow-Through Basin: Stream #2| 294.9     232.5|
16.417 | 19.50|                                     |                                     |
| 126.00     126.00| Stream #2 Added to: Stream #1| 18648.0   18748.6|
18.083 |                                     |                                     |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 126.00     126.00| Zero Out:           Stream #2|      232.5     0.0|
|                                     |                                     |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0     87.4|
16.333 |                                     |                                     |
| 126.00     126.00| Stream #2 Added to: Stream #1| 18748.6   18768.2|
18.083 |                                     |                                     |
| 126.00     126.00| Zero Out:           Stream #2|      87.4     0.0|
|                                     |                                     |
| 126.00    12720.50| Convex Routing:     Stream #1| 18768.2   18758.0|
18.167 |                                     |                                     |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0    420.2|
16.333 |                                     |                                     |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0    274.2|
16.333 |                                     |                                     |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0     48.3|
16.417 |                                     |                                     |
| 331.00     331.00| Stream #4 Added to: Stream #2| 420.2     464.9|
16.333 |                                     |                                     |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
```

	331.00	331.00	Zero Out:	Stream #4	48.3	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	464.9	739.1
16.333						
	331.00	331.00	Zero Out:	Stream #3	274.2	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	739.1	526.7
16.500		75.38				
	331.00	12720.50	Stream #2 Added to:	Stream #1	18758.0	19087.4
18.167						
	12720.50	12720.50	Zero Out:	Stream #2	526.7	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	19087.4	19056.0
18.250						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	246.0
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	19056.0	19139.9
18.250						
	127.00	127.00	Zero Out:	Stream #2	246.0	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	426.6
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	19139.9	19385.9
17.250						
	127.00	127.00	Zero Out:	Stream #2	426.6	0.0
	127.00	129.00	Convex Routing:	Stream #1	19385.9	19371.2
17.417						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	237.0
16.417						
	129.00	129.00	Stream #2 Added to:	Stream #1	19371.2	19489.4
17.333						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	237.0	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	126.5
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	126.5	20.2
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	20.2	16.4
17.250		4.06				
	221.00	222.00	Flow-Through Basin:	Stream #5	106.4	36.4
17.500		16.78				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV00137C.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
17.500	223.00	222.00	16.4
17.333	222.00	222.00	36.4
17.083	222.00	129.00	19489.4
17.083	129.00	129.00	52.6
17.417	129.00	133.00	19541.8

17.500	223.00	222.00	Stream #5 Added to: Stream #2	16.4	52.6
17.333	222.00	222.00	Zero Out: Stream #5	36.4	0.0
17.083	222.00	129.00	Stream #2 Added to: Stream #1	19489.4	19541.8
17.083	129.00	129.00	Zero Out: Stream #2	52.6	0.0
17.417	129.00	133.00	Convex Routing: Stream #1	19541.8	19534.2

16.833	13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1496.3
16.833	132.00	132.00	Flowby Basin Model: Stream #2	1496.3	1289.0
17.083	132.00	132.00	Flow-Through Basin: Stream #3	207.3	193.4
17.083	17.083	21.30	Split Hydrograph: Stream #3	193.4	96.7
18.917	132.00	132.00	Flow-Through Basin: Stream #3	96.7	21.5
18.917	18.917	13.82			

16.833	132.00	132.00	Stream #3 Added to: Stream #2	1289.0	1303.9
16.833	132.00	132.00	Zero Out: Stream #3	21.5	0.0
18.917	132.00	132.00	Flow-Through Basin: Stream #4	96.7	21.5
16.833	18.917	13.97			
16.833	132.00	132.00	Stream #4 Added to: Stream #2	1303.9	1318.1
16.833	132.00	132.00	Zero Out: Stream #4	21.5	0.0

17.583	132.00	13305.00	Convex Routing: Stream #2	1318.1	1287.1
17.583	13305.00	133.00	Convex Routing: Stream #2	1287.1	1273.6
16.667	132.00	133.00	Subarea (UH) Added to Stream #3	0.0	648.5
17.500	133.00	133.00	Stream #3 Added to: Stream #2	1273.6	1765.7

17.417	133.00	133.00	Zero Out: Stream #3	648.5	0.0
17.417	133.00	133.00	Stream #2 Added to: Stream #1	19534.2	21296.3
17.583	133.00	133.00	Zero Out: Stream #2	1765.7	0.0
17.583	133.00	134.00	Convex Routing: Stream #1	21296.3	21280.4
16.417	133.00	134.00	Subarea (UH) Added to Stream #2	0.0	751.9
17.583	134.00	134.00	Stream #2 Added to: Stream #1	21280.4	21649.6
17.250	134.00	134.00	Zero Out: Stream #2	751.9	0.0
17.500	13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	1180.6
17.500	134.00	134.00	Stream #2 Added to: Stream #1	21649.6	22795.4
17.667	134.00	134.00	Zero Out: Stream #2	1180.6	0.0
17.667	134.00	137.00	Convex Routing: Stream #1	22795.4	22782.4
16.417	134.00	137.00	Subarea (UH) Added to Stream #2	0.0	514.8
17.667	137.00	137.00	Stream #2 Added to: Stream #1	22782.4	23041.9
17.667	137.00	137.00	Zero Out: Stream #2	514.8	0.0
17.667	137.00	137.00	View: Stream #1		23041.9
17.667	17.667	19243.59	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV00137C.DAT
TIME/DATE OF STUDY: 16:38 08/09/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.579
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.252 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.323
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
          DATA PAIR           Qcenter           Qpass
          NUMBER              (CFS)              (CFS)
          -                   -                   -
          1                   25.00         13.59
          2                   75.00         16.84
          3                   100.00        18.46
          4                   250.00        28.22
          5                   550.00        47.73
          FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
          INTERVAL    DEPTH    OUTFLOW    STORAGE
          NUMBER      (FT)    (CFS)     (AF)
          1            0.00     0.00     0.000
          2            1.00     0.01     0.310
          3            2.00     0.83     1.240
          4            3.00     5.60     2.600
          5            4.00    16.88     4.130
          6            5.00    23.48     5.790
          7            6.00    36.73     7.560
          8            7.00    55.95     9.440
          9            8.00    78.70    11.430
          10           9.00   228.67    12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.610 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.363  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.353 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.252 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.408
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.404 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.421
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 11  
=====

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

```
-----+-----+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV00137C.DAT ]
| Page: 1 of 1
|-----+-----+-----+
| UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM| |
| TIME (2) TO | MAX. STORAGE|                                     |                                     |
| NODE #      NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
| PEAK (HR)   | MODELED (AF)| FOOTNOTES |
|-----+-----+-----+
| 10100.00    119.00| Subarea (UH) Added to Stream #1|      0.0    18754.2|
18.000 |                                     |
| 119.00      12603.00| Convex Routing:      Stream #1| 18754.2    18622.0|
18.000 |                                     |
| 810.00      809.00| Subarea (UH) Added to Stream #2|      0.0     111.5|
16.250 |                                     |
| 809.00      12603.00| Flow-Through Basin: Stream #2| 111.5      68.2|
16.417 |      13.91|                                     |
| 12603.00    12603.00| Stream #2 Added to: Stream #1| 18622.0    18662.0|
18.000 |                                     |
|-----+-----+-----+
| 12603.00    12603.00| Zero Out:           Stream #2|      68.2     0.0|
|                                     |
| 12603.00    126.00| Convex Routing:     Stream #1| 18662.0    18648.0|
18.083 |                                     |
| 920.00      905.00| Subarea (UH) Added to Stream #2|      0.0     294.9|
16.250 |                                     |
| 905.00      126.00| Flow-Through Basin: Stream #2| 294.9     232.5|
16.417 |      19.50|                                     |
| 126.00      126.00| Stream #2 Added to: Stream #1| 18648.0    18748.6|
18.083 |                                     |
|-----+-----+-----+
| 126.00      126.00| Zero Out:           Stream #2| 232.5      0.0|
|                                     |
| 600.00      126.00| Subarea (UH) Added to Stream #2|      0.0     87.4|
16.333 |                                     |
| 126.00      126.00| Stream #2 Added to: Stream #1| 18748.6    18768.2|
18.083 |                                     |
| 126.00      126.00| Zero Out:           Stream #2|      87.4     0.0|
|                                     |
| 126.00     12720.50| Convex Routing:     Stream #1| 18768.2    18758.0|
18.167 |                                     |
|-----+-----+-----+
| 320.00      331.00| Subarea (UH) Added to Stream #2|      0.0     420.2|
16.333 |                                     |
| 400.00      331.00| Subarea (UH) Added to Stream #3|      0.0     274.2|
16.333 |                                     |
| 390.00      331.00| Subarea (UH) Added to Stream #4|      0.0      48.3|
16.417 |                                     |
| 331.00      331.00| Stream #4 Added to: Stream #2| 420.2     464.9|
16.333 |                                     |
|-----+-----+-----+
```

	331.00	331.00	Zero Out:	Stream #4	48.3	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	464.9	739.1
16.333						
	331.00	331.00	Zero Out:	Stream #3	274.2	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	739.1	526.7
16.500		75.38				
	331.00	12720.50	Stream #2 Added to:	Stream #1	18758.0	19087.4
18.167						
	12720.50	12720.50	Zero Out:	Stream #2	526.7	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	19087.4	19056.0
18.250						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	246.0
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	19056.0	19139.9
18.250						
	127.00	127.00	Zero Out:	Stream #2	246.0	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	426.6
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	19139.9	19385.9
17.250						
	127.00	127.00	Zero Out:	Stream #2	426.6	0.0
	127.00	129.00	Convex Routing:	Stream #1	19385.9	19371.2
17.417						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	237.0
16.417						
	129.00	129.00	Stream #2 Added to:	Stream #1	19371.2	19489.4
17.333						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	237.0	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	126.5
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	126.5	20.2
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	20.2	16.4
17.250		4.06				
	221.00	222.00	Flow-Through Basin:	Stream #5	106.4	36.4
17.500		16.78				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV00137C.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	FOOTNOTES
--	--	------------------------------	------------------------	--------------------------	-----------

223.00	222.00	Stream #5 Added to:	Stream #2	16.4	52.6
17.500					
222.00	222.00	Zero Out:	Stream #5	36.4	0.0
222.00	129.00	Stream #2 Added to:	Stream #1	19489.4	19541.8
17.333					
129.00	129.00	Zero Out:	Stream #2	52.6	0.0
129.00	133.00	Convex Routing:	Stream #1	19541.8	19534.2
17.417					

13010.00	132.00	Subarea (UH) Added to	Stream #2	0.0	1496.3
16.833					
132.00	132.00	Flowby Basin Model:	Stream #2	1496.3	1289.0
16.833					
132.00	132.00	Flow-Through Basin:	Stream #3	207.3	193.4
17.083	21.30				
132.00	132.00	Split Hydrograph:	Stream #3	193.4	96.7
17.083					
132.00	132.00	Flow-Through Basin:	Stream #3	96.7	21.5
18.917	13.82				

132.00	132.00	Stream #3 Added to:	Stream #2	1289.0	1303.9
16.833					
132.00	132.00	Zero Out:	Stream #3	21.5	0.0
132.00	132.00	Flow-Through Basin:	Stream #4	96.7	21.5
18.917	13.97				
132.00	132.00	Stream #4 Added to:	Stream #2	1303.9	1318.1
16.833					
132.00	132.00	Zero Out:	Stream #4	21.5	0.0

132.00	13305.00	Convex Routing:	Stream #2	1318.1	1287.1
17.333					
13305.00	133.00	Convex Routing:	Stream #2	1287.1	1273.6
17.583					
132.00	133.00	Subarea (UH) Added to	Stream #3	0.0	648.5
16.667					
133.00	133.00	Stream #3 Added to:	Stream #2	1273.6	1765.7
17.500					

133.00	133.00	Zero Out:	Stream #3	648.5	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	19534.2	21296.3
17.417					
133.00	133.00	Zero Out:	Stream #2	1765.7	0.0
133.00	134.00	Convex Routing:	Stream #1	21296.3	21280.4
17.583					
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	751.9
16.417					
134.00	134.00	Stream #2 Added to:	Stream #1	21280.4	21649.6
17.583					
134.00	134.00	Zero Out:	Stream #2	751.9	0.0
13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	1180.6
17.250					
134.00	134.00	Stream #2 Added to:	Stream #1	21649.6	22795.4
17.500					
134.00	134.00	Zero Out:	Stream #2	1180.6	0.0
134.00	137.00	Convex Routing:	Stream #1	22795.4	22782.4
17.667					

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV00138C.DAT
TIME/DATE OF STUDY: 16:40 08/09/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.579
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.252 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.323
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL   DEPTH   OUTFLOW   STORAGE
NUMBER     (FT)    (CFS)     (AF)
-----
1           0.00     0.00     0.000
2           1.00     1.84     0.260
3           2.00     3.22     1.160
4           3.00     4.16     2.520
5           4.00     4.94     3.990
6           5.00     5.60     5.550
7           6.00     7.17     7.200
8           7.00    14.13    8.950
9           8.00    18.54   10.800
10          9.00    21.90   12.740
11         10.00    24.73   14.750
12         11.00    37.17   16.920
13         12.00    57.63   19.160
14         13.00    83.32   21.500
15         14.00   112.96   23.940
16         15.00   133.28   26.480
17         16.00   144.34   29.150
18         17.00   154.45   31.950
19         18.00   163.94   34.870
20         19.00   172.92   37.940
21         20.00   181.39   41.140
22         21.00   189.45   44.500
23         22.00   197.22   48.010
24         23.00   466.70   51.740
25         24.00   951.81   53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00   CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52   MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.610 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.363  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.353 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.252 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.408
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.404 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.421
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70  
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.503 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.267; LOW LOSS FRACTION = 0.450  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV00138C.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	18668.4
18.000				
119.00	12603.00	Convex Routing: Stream #1	18668.4	18537.1
18.000				
810.00	809.00	Subarea (UH) Added to Stream #2	0.0	110.4
16.250				
809.00	12603.00	Flow-Through Basin: Stream #2	110.4	67.6
16.417	13.89			
12603.00	12603.00	Stream #2 Added to: Stream #1	18537.1	18577.1
18.000				
12603.00	12603.00	Zero Out: Stream #2	67.6	0.0
12603.00	126.00	Convex Routing: Stream #1	18577.1	18563.8
18.083				
920.00	905.00	Subarea (UH) Added to Stream #2	0.0	292.0
16.250				
905.00	126.00	Flow-Through Basin: Stream #2	292.0	230.0
16.417	19.47			
126.00	126.00	Stream #2 Added to: Stream #1	18563.8	18664.7
18.083				
126.00	126.00	Zero Out: Stream #2	230.0	0.0
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	86.4
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	18664.7	18684.4
18.083				
126.00	126.00	Zero Out: Stream #2	86.4	0.0
126.00	12720.50	Convex Routing: Stream #1	18684.4	18674.4
18.167				
320.00	331.00	Subarea (UH) Added to Stream #2	0.0	416.9
16.333				
400.00	331.00	Subarea (UH) Added to Stream #3	0.0	271.8
16.333				
390.00	331.00	Subarea (UH) Added to Stream #4	0.0	47.9
16.417				
331.00	331.00	Stream #4 Added to: Stream #2	416.9	461.3
16.333				

331.00	331.00	Zero Out: Stream #4	47.9	0.0
331.00	331.00	Stream #3 Added to: Stream #2	461.3	733.0
16.333				
331.00	331.00	Zero Out: Stream #3	271.8	0.0
331.00	331.00	Flow-Through Basin: Stream #2	733.0	523.1
16.500	75.25			
331.00	12720.50	Stream #2 Added to: Stream #1	18674.4	19004.3
18.167				
12720.50	12720.50	Zero Out: Stream #2	523.1	0.0
12720.50	127.00	Convex Routing: Stream #1	19004.3	18973.7
18.250				
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	243.5
16.500				
127.00	127.00	Stream #2 Added to: Stream #1	18973.7	19057.9
18.250				
127.00	127.00	Zero Out: Stream #2	243.5	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	422.5
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	19057.9	19312.8
17.250				
127.00	127.00	Zero Out: Stream #2	422.5	0.0
127.00	129.00	Convex Routing: Stream #1	19312.8	19296.8
17.417				
50300.00	129.00	Subarea (UH) Added to Stream #2	0.0	234.6
16.417				
129.00	129.00	Stream #2 Added to: Stream #1	19296.8	19417.2
17.333				
129.00	129.00	Zero Out: Stream #2	234.6	0.0
210.00	221.00	Subarea (UH) Added to Stream #2	0.0	125.4
16.333				
221.00	221.00	Flowby Basin Model: Stream #2	125.4	20.1
16.333				
221.00	223.00	Flow-Through Basin: Stream #2	20.1	16.4
17.250	4.06			
221.00	222.00	Flow-Through Basin: Stream #5	105.3	36.1
17.500	16.73			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV00138C.DAT ]
Page: 2 of |
-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+
| 223.00 222.00| Stream #5 Added to: Stream #2| 16.4 52.4|
17.500 | | |
| 222.00 222.00| Zero Out: Stream #5| 36.1 0.0|
| | | |
| 222.00 129.00| Stream #2 Added to: Stream #1| 19417.2 19469.3|
17.333 | | |
| 129.00 129.00| Zero Out: Stream #2| 52.4 0.0|
| | | |
| 129.00 133.00| Convex Routing: Stream #1| 19469.3 19461.1|
17.417 | | |
-----+
| 13010.00 132.00| Subarea (UH) Added to Stream #2| 0.0 1483.7|
16.833 | | |
| 132.00 132.00| Flowby Basin Model: Stream #2| 1483.7 1278.8|
16.833 | | |
| 132.00 132.00| Flow-Through Basin: Stream #3| 204.9 191.1|
17.083 | 21.26| |
| 132.00 132.00| Split Hydrograph: Stream #3| 191.1 95.6|
17.083 | | |
| 132.00 132.00| Flow-Through Basin: Stream #3| 95.6 21.4|
18.917 | 13.69| |
-----+
| 132.00 132.00| Stream #3 Added to: Stream #2| 1278.8 1293.7|
16.833 | | |
| 132.00 132.00| Zero Out: Stream #3| 21.4 0.0|
| | | |
| 132.00 132.00| Flow-Through Basin: Stream #4| 95.6 21.4|
18.917 | 13.84| |
| 132.00 132.00| Stream #4 Added to: Stream #2| 1293.7 1307.8|
16.833 | | |
| 132.00 132.00| Zero Out: Stream #4| 21.4 0.0|
| | | |
-----+
| 132.00 13305.00| Convex Routing: Stream #2| 1307.8 1277.2|
17.333 | | |
| 13305.00 133.00| Convex Routing: Stream #2| 1277.2 1264.0|
17.583 | | |
| 132.00 133.00| Subarea (UH) Added to Stream #3| 0.0 643.6|
16.667 | | |
| 133.00 133.00| Stream #3 Added to: Stream #2| 1264.0 1754.6|
17.500 | | |

```

	133.00	133.00	Zero Out:	Stream #3	643.6	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	19461.1	21211.8
17.417						
	133.00	133.00	Zero Out:	Stream #2	1754.6	0.0
	133.00	134.00	Convex Routing:	Stream #1	21211.8	21195.7
17.583						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	745.0
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	21195.7	21565.3
17.583						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	745.0	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	1173.4
17.250						
	134.00	134.00	Stream #2 Added to:	Stream #1	21565.3	22706.4
17.500						
	134.00	134.00	Zero Out:	Stream #2	1173.4	0.0
	134.00	137.00	Convex Routing:	Stream #1	22706.4	22693.1
17.667						
+-----+						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	504.3
16.500						
	137.00	137.00	Stream #2 Added to:	Stream #1	22693.1	22955.1
17.667						
	137.00	137.00	Zero Out:	Stream #2	504.3	0.0
	137.00	138.00	Convex Routing:	Stream #1	22955.1	22935.3
17.833						
	137.00	138.00	Subarea (UH) Added to	Stream #2	0.0	469.6
16.583						
+-----+						
	138.00	138.00	Stream #2 Added to:	Stream #1	22935.3	23204.6
17.750						
	138.00	138.00	Zero Out:	Stream #2	469.6	0.0
	138.00	138.00	View:	Stream #1		23204.6
17.750		19488.55	3			
+-----+						
+-----+						
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL						
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM						
+-----+						
+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 100-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV00139C.DAT
TIME/DATE OF STUDY: 16:44 08/09/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.964 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.380
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.51; 30-MINUTE = 0.95; 1-HOUR = 1.32
3-HOUR = 2.49; 6-HOUR = 3.72; 24-HOUR = 6.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.183 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.374
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.215 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.434
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.289 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.711
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.285 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.239  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.311  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.451  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.403 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.598  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.355 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.579
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.252 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.323
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.795 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.610 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.363  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.353 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.252 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.408
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.404 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.421
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70  
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.503 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.267; LOW LOSS FRACTION = 0.450  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 119.70; DOWNSTREAM ELEVATION(FT) = 100.00  
CHANNEL LENGTH(FT) = 3107.78 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 428.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.240 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.207; LOW LOSS FRACTION = 0.422  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15  
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.347; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV00139C.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	18626.3
18.000				
119.00	12603.00	Convex Routing: Stream #1	18626.3	18495.2
18.000				
810.00	809.00	Subarea (UH) Added to Stream #2	0.0	110.0
16.250				
809.00	12603.00	Flow-Through Basin: Stream #2	110.0	67.4
16.417	13.88			
12603.00	12603.00	Stream #2 Added to: Stream #1	18495.2	18535.3
18.000				
12603.00	12603.00	Zero Out: Stream #2	67.4	0.0
12603.00	126.00	Convex Routing: Stream #1	18535.3	18522.4
18.083				
920.00	905.00	Subarea (UH) Added to Stream #2	0.0	291.0
16.250				
905.00	126.00	Flow-Through Basin: Stream #2	291.0	229.1
16.417	19.46			
126.00	126.00	Stream #2 Added to: Stream #1	18522.4	18623.4
18.083				
126.00	126.00	Zero Out: Stream #2	229.1	0.0
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	86.0
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	18623.4	18643.2
18.083				
126.00	126.00	Zero Out: Stream #2	86.0	0.0
126.00	12720.50	Convex Routing: Stream #1	18643.2	18633.1
18.167				
320.00	331.00	Subarea (UH) Added to Stream #2	0.0	415.7
16.333				
400.00	331.00	Subarea (UH) Added to Stream #3	0.0	270.9
16.333				
390.00	331.00	Subarea (UH) Added to Stream #4	0.0	47.7
16.417				
331.00	331.00	Stream #4 Added to: Stream #2	415.7	459.9
16.333				

331.00	331.00	Zero Out: Stream #4	47.7	0.0
331.00	331.00	Stream #3 Added to: Stream #2	459.9	730.8
16.333				
331.00	331.00	Zero Out: Stream #3	270.9	0.0
331.00	331.00	Flow-Through Basin: Stream #2	730.8	522.0
16.500	75.20			
331.00	12720.50	Stream #2 Added to: Stream #1	18633.1	18963.1
18.167				
12720.50	12720.50	Zero Out: Stream #2	522.0	0.0
12720.50	127.00	Convex Routing: Stream #1	18963.1	18933.0
18.250				
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	242.6
16.500				
127.00	127.00	Stream #2 Added to: Stream #1	18933.0	19018.9
17.250				
127.00	127.00	Zero Out: Stream #2	242.6	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	421.0
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	19018.9	19275.1
17.250				
127.00	127.00	Zero Out: Stream #2	421.0	0.0
127.00	129.00	Convex Routing: Stream #1	19275.1	19258.4
17.417				
50300.00	129.00	Subarea (UH) Added to Stream #2	0.0	233.8
16.417				
129.00	129.00	Stream #2 Added to: Stream #1	19258.4	19380.0
17.333				
129.00	129.00	Zero Out: Stream #2	233.8	0.0
210.00	221.00	Subarea (UH) Added to Stream #2	0.0	125.0
16.333				
221.00	221.00	Flowby Basin Model: Stream #2	125.0	20.1
16.333				
221.00	223.00	Flow-Through Basin: Stream #2	20.1	16.3
17.250	4.06			
221.00	222.00	Flow-Through Basin: Stream #5	105.0	36.0
17.500	16.72			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV00139C.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|    16.3    52.3|
17.500 |          |          |
| 222.00    222.00| Zero Out:           Stream #5|    36.0    0.0|
|          |          |          |
| 222.00    129.00| Stream #2 Added to:  Stream #1| 19380.0   19432.0|
17.333 |          |          |
| 129.00    129.00| Zero Out:           Stream #2|    52.3    0.0|
|          |          |          |
| 129.00    133.00| Convex Routing:     Stream #1| 19432.0   19423.6|
17.417 |          |          |
-----+-----+-----+-----+
| 13010.00   132.00| Subarea (UH) Added to Stream #2|    0.0    1479.7|
16.833 |          |          |
| 132.00    132.00| Flowby Basin Model:  Stream #2| 1479.7    1275.5|
16.833 |          |          |
| 132.00    132.00| Flow-Through Basin:  Stream #3| 204.1     190.4|
17.083 |          | 21.25|
| 132.00    132.00| Split Hydrograph:   Stream #3| 190.4     95.2|
17.083 |          |          |
| 132.00    132.00| Flow-Through Basin:  Stream #3| 95.2      21.4|
18.917 |          | 13.65|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to:  Stream #2| 1275.5    1290.4|
16.833 |          |          |
| 132.00    132.00| Zero Out:           Stream #3| 21.4      0.0|
|          |          |          |
| 132.00    132.00| Flow-Through Basin:  Stream #4| 95.2      21.4|
18.917 |          | 13.80|
| 132.00    132.00| Stream #4 Added to:  Stream #2| 1290.4    1304.4|
16.833 |          |          |
| 132.00    132.00| Zero Out:           Stream #4| 21.4      0.0|
|          |          |          |
-----+-----+-----+-----+
| 132.00    13305.00| Convex Routing:     Stream #2| 1304.4    1274.1|
17.333 |          |          |
| 13305.00   133.00| Convex Routing:     Stream #2| 1274.1    1260.9|
17.583 |          |          |
| 132.00    133.00| Subarea (UH) Added to Stream #3|    0.0     642.0|
16.667 |          |          |
| 133.00    133.00| Stream #3 Added to:  Stream #2| 1260.9    1751.0|
17.500 |          |          |

```

	133.00	133.00	Zero Out:	Stream #3	642.0	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	19423.6	21170.6
17.417						
	133.00	133.00	Zero Out:	Stream #2	1751.0	0.0
	133.00	134.00	Convex Routing:	Stream #1	21170.6	21154.4
17.583						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	742.7
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	21154.4	21524.1
17.583						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	742.7	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	1171.3
17.250						
	134.00	134.00	Stream #2 Added to:	Stream #1	21524.1	22664.5
17.500						
	134.00	134.00	Zero Out:	Stream #2	1171.3	0.0
	134.00	137.00	Convex Routing:	Stream #1	22664.5	22650.9
17.667						
+-----+						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	502.8
16.500						
	137.00	137.00	Stream #2 Added to:	Stream #1	22650.9	22913.1
17.667						
	137.00	137.00	Zero Out:	Stream #2	502.8	0.0
	137.00	138.00	Convex Routing:	Stream #1	22913.1	22892.9
17.750						
	137.00	138.00	Subarea (UH) Added to	Stream #2	0.0	467.7
16.583						
+-----+						
	138.00	138.00	Stream #2 Added to:	Stream #1	22892.9	23163.5
17.750						
	138.00	138.00	Zero Out:	Stream #2	467.7	0.0
	138.00	139.00	Convex Routing:	Stream #1	23163.5	23157.5
17.833						
	138.00	139.00	Subarea (UH) Added to	Stream #2	0.0	225.0
16.333						
	139.00	139.00	Stream #2 Added to:	Stream #1	23157.5	23238.1
17.833						

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

| INPUT FILENAME: [EV00139C.DAT ]

Page: 3 of |

UPSTREAM	DOWNSTREAM		UPSTREAM	DOWNSTREAM
TIME (2) TO	MAX. STORAGE			
NODE #	NODE #	HYDROLOGIC/HYDRAULIC PROCESS	PEAK (CFS)	PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES		

139.00	139.00	Zero Out:	Stream #2	225.0	0.0
139.00	139.00	View:	Stream #1		23238.1
17.833	19563.37	3			

| Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV0233CC.DAT
TIME/DATE OF STUDY: 10:52 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.17; 30-MINUTE = 0.33; 1-HOUR = 0.45
3-HOUR = 0.84; 6-HOUR = 1.26; 24-HOUR = 2.22
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 1260.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 312.40; DOWNSTREAM ELEVATION (FT) = 286.00
CHANNEL LENGTH (FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.00	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.430 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.201; LOW LOSS FRACTION = 0.412  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40  
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.315 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.270; LOW LOSS FRACTION = 0.508  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40  
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.578 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.566; LOW LOSS FRACTION = 0.925  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40  
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.472 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.586; LOW LOSS FRACTION = 0.976  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40  
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.589 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40  
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.564; LOW LOSS FRACTION = 0.940
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.309 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.256; LOW LOSS FRACTION = 0.498
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.490
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL  DEPTH  OUTFLOW  STORAGE
NUMBER    (FT)   (CFS)    (AF)
-----
1         0.00    0.00     0.000
2         1.00    1.84     0.260
3         2.00    3.22     1.160
4         3.00    4.16     2.520
5         4.00    4.94     3.990
6         5.00    5.60     5.550
7         6.00    7.17     7.200
8         7.00   14.13    8.950
9         8.00   18.54   10.800
10        9.00   21.90   12.740
11       10.00   24.73   14.750
12       11.00   37.17   16.920
13       12.00   57.63   19.160
14       13.00   83.32   21.500
15       14.00  112.96   23.940
16       15.00  133.28   26.480
17       16.00  144.34   29.160
18       17.00  154.45   31.950
19       18.00  163.94   34.870
20       19.00  172.92   37.940
21       20.00  181.39   41.140
22       21.00  189.45   44.500
23       22.00  197.22   48.010
24       23.00  466.70   51.740
25       24.00  951.81   53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01   CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52   MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.262 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.487; LOW LOSS FRACTION = 0.830
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

\*\*\*\*\*  
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.  
\*\*\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----  
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<  
-----

\*\*\*\*\*  
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.  
\*\*\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----  
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<  
-----

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<  
-----

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00  
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<  
-----

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.948 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.449; LOW LOSS FRACTION = 0.752  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.31; 1-HOUR = 0.40  
3-HOUR = 0.68; 6-HOUR = 0.93; 24-HOUR = 1.57  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0233CC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	562.0
20.417				
119.00	12603.00	Convex Routing: Stream #1	562.0	560.4
20.500				
810.00	809.00	Subarea (UH) Added to Stream #2	0.0	17.2
16.250				
809.00	1260.00	Flow-Through Basin: Stream #2	17.2	1.7
23.500	5.68			
12603.00	12603.00	Stream #2 Added to: Stream #1	560.4	562.1
20.500				
12603.00	12603.00	Zero Out: Stream #2	1.7	0.0
12603.00	126.00	Convex Routing: Stream #1	562.1	561.0
20.583				
920.00	905.00	Subarea (UH) Added to Stream #2	0.0	19.2
16.333				
905.00	126.00	Flow-Through Basin: Stream #2	19.2	1.6
24.250	7.64			
126.00	126.00	Stream #2 Added to: Stream #1	561.0	562.6
20.583				
126.00	126.00	Zero Out: Stream #2	1.6	0.0
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	1.6
16.500				
126.00	126.00	Stream #2 Added to: Stream #1	562.6	562.9
20.583				
126.00	126.00	Zero Out: Stream #2	1.6	0.0
126.00	12720.50	Convex Routing: Stream #1	562.9	562.0
20.750				
320.00	331.00	Subarea (UH) Added to Stream #2	0.0	99.1
16.417				
400.00	331.00	Subarea (UH) Added to Stream #3	0.0	54.8
16.333				
390.00	331.00	Subarea (UH) Added to Stream #4	0.0	1.8
16.667				
331.00	331.00	Stream #4 Added to: Stream #2	99.1	100.7
16.417				

331.00	331.00	Zero Out: Stream #4	1.8	0.0
331.00	331.00	Stream #3 Added to: Stream #2	100.7	154.8
16.417				
331.00	331.00	Zero Out: Stream #3	54.8	0.0
331.00	331.00	Flow-Through Basin: Stream #2	154.8	84.9
17.500	54.38			
331.00	12720.50	Stream #2 Added to: Stream #1	562.0	604.4
20.000				
12720.50	12720.50	Zero Out: Stream #2	84.9	0.0
12720.50	127.00	Convex Routing: Stream #1	604.4	603.9
20.833				
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	3.6
16.500				
127.00	127.00	Stream #2 Added to: Stream #1	603.9	604.5
20.833				
127.00	127.00	Zero Out: Stream #2	3.6	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	8.0
16.667				
127.00	127.00	Stream #2 Added to: Stream #1	604.5	606.2
20.083				
127.00	127.00	Zero Out: Stream #2	8.0	0.0
127.00	129.00	Convex Routing: Stream #1	606.2	605.9
21.000				
50300.00	129.00	Subarea (UH) Added to Stream #2	0.0	7.5
16.667				
129.00	129.00	Stream #2 Added to: Stream #1	605.9	607.3
21.000				
129.00	129.00	Zero Out: Stream #2	7.5	0.0
210.00	221.00	Subarea (UH) Added to Stream #2	0.0	26.2
16.333				
221.00	221.00	Flowby Basin Model: Stream #2	26.2	13.7
16.333				
221.00	223.00	Flow-Through Basin: Stream #2	13.7	6.2
17.917	2.68			
221.00	222.00	Flow-Through Basin: Stream #5	12.6	3.9
18.333	2.19			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0233CC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|      6.2    10.1|
18.000 |                |
| 222.00    222.00| Zero Out:           Stream #5|      3.9    0.0|
|                |
| 222.00    129.00| Stream #2 Added to:  Stream #1|     607.3   615.1|
20.333 |                |
| 129.00    129.00| Zero Out:           Stream #2|      10.1    0.0|
|                |
| 129.00    133.00| Convex Routing:     Stream #1|     615.1   614.8|
21.083 |                |
-----+-----+-----+-----+
| 13010.00   132.00| Subarea (UH) Added to Stream #2|      0.0    147.0|
17.333 |                |
| 132.00    132.00| Flowby Basin Model: Stream #2|     147.0   147.0|
17.333 |                |
| 132.00    132.00| Zero Out:           Stream #3|      0.0    0.0|
|                |
| 132.00    132.00| Zero Out:           Stream #4|      0.0    0.0|
|                |
| 132.00    13305.00| Convex Routing:     Stream #2|     147.0   145.3|
17.917 |                |
-----+-----+-----+-----+
| 13305.00   133.00| Convex Routing:     Stream #2|     145.3   144.7|
18.250 |                |
| 132.00    133.00| Subarea (UH) Added to Stream #3|      0.0    78.0|
17.000 |                |
| 133.00    133.00| Stream #3 Added to: Stream #2|     144.7   211.0|
17.167 |                |
| 133.00    133.00| Zero Out:           Stream #3|      78.0    0.0|
|                |
| 133.00    133.00| Stream #2 Added to: Stream #1|     614.8   732.4|
18.417 |                |
-----+-----+-----+-----+
| 133.00    133.00| Zero Out:           Stream #2|     211.0    0.0|
|                |
| 133.00    133.00| View:               Stream #1|     732.4|
18.417 |    832.64|    3 |
-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL

```

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF  
THE DESIGN STORM |

+-----+  
-----+

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV OCT 2022 ROKAMOTO \*

FILE NAME: EVO233TC.DAT
TIME/DATE OF STUDY: 14:47 10/27/2022

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.262 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.487; LOW LOSS FRACTION = 0.830
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows: -, 1, 2.

3 4682.00 3013.00
4 6819.00 4013.00
5 8100.00 4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

\*\*\*\*\*
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
\*\*\*\*\*

```

*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
=====
*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
      PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    13305.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01    CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00
CHANNEL LENGTH(FT) = 9760.05    MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE    13305.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01    CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00
CHANNEL LENGTH(FT) = 6877.24    MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00
=====

```

\*\*\*\*\*

```

FLOW PROCESS FROM NODE    132.00 TO NODE    133.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
=====
WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.947 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.449; LOW LOSS FRACTION = 0.752
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
=====
*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
=====
*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
*****
FLOW PROCESS FROM NODE    134.00 TO NODE    134.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
=====

```

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

| INPUT FILENAME: [EV0233TC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	PEAK (CFS)	PEAK (CFS)
-------------------------	----------------------------	--------------------	----------------------	------------------------------	------------	------------

13010.00	132.00			Subarea (UH) Added to Stream #2	0.0	352.4
17.333						
132.00	132.00			Flowby Basin Model: Stream #2	352.4	352.4
17.333						
132.00	132.00			Zero Out: Stream #3	0.0	0.0
132.00	132.00			Zero Out: Stream #4	0.0	0.0
132.00	13305.00			Convex Routing: Stream #2	352.4	339.8
17.667						

13305.00	133.00			Convex Routing: Stream #2	339.8	329.9
17.917						
132.00	133.00			Subarea (UH) Added to Stream #3	0.0	178.9
17.000						
133.00	133.00			Stream #3 Added to: Stream #2	329.9	402.8
17.917						
133.00	133.00			Zero Out: Stream #3	178.9	0.0
133.00	133.00			Stream #2 Added to: Stream #1	0.0	402.8
17.917						

133.00	133.00			Zero Out: Stream #2	402.8	0.0
134.00	134.00			View: Stream #1		402.8
17.917	170.65	3				

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EVO233UC.DAT
TIME/DATE OF STUDY: 10:53 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.17; 30-MINUTE = 0.32; 1-HOUR = 0.44
3-HOUR = 0.82; 6-HOUR = 1.23; 24-HOUR = 2.17
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 312.40; DOWNSTREAM ELEVATION (FT) = 286.00
CHANNEL LENGTH (FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.00	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.430 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.201; LOW LOSS FRACTION = 0.412  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.315 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.270; LOW LOSS FRACTION = 0.508  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.578 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.566; LOW LOSS FRACTION = 0.925  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.472 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.586; LOW LOSS FRACTION = 0.976  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.589 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.564; LOW LOSS FRACTION = 0.940
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.309 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.256; LOW LOSS FRACTION = 0.498
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.460
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

   INTERVAL    DEPTH    OUTFLOW    STORAGE
   NUMBER      (FT)     (CFS)     (AF)
   -----
1         0.00         0.00         0.000
2         1.00         1.84         0.260
3         2.00         3.22         1.160
4         3.00         4.16         2.520
5         4.00         4.94         3.990
6         5.00         5.60         5.550
7         6.00         7.17         7.200
8         7.00        14.13        8.950
9         8.00        18.54       10.800
10        9.00        21.90       12.740
11       10.00        24.73       14.750
12       11.00        37.17       16.920
13       12.00        57.63       19.160
14       13.00        83.32       21.500
15       14.00       112.96       23.940
16       15.00       133.28       26.480
17       16.00       144.34       29.150
18       17.00       154.45       31.950
19       18.00       163.94       34.870
20       19.00       172.92       37.940
21       20.00       181.39       41.140
22       21.00       189.45       44.500
23       22.00       197.22       48.010
24       23.00       466.70       51.740
25       24.00       951.81       53.820
=====

```

```

*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01    CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 213.00; DOWNSTREAM ELEVATION(FT) = 212.00
CHANNEL LENGTH(FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

```

```

*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 11
-----

```

```

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0233UC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	575.3
20.417					
119.00	12603.00		Convex Routing: Stream #1	575.3	571.8
20.500					
810.00	809.00		Subarea (UH) Added to Stream #2	0.0	17.9
16.250					
809.00	12603.00		Flow-Through Basin: Stream #2	17.9	1.7
23.333	5.58				
12603.00	12603.00		Stream #2 Added to: Stream #1	571.8	573.5
20.500					
12603.00	12603.00		Zero Out: Stream #2	1.7	0.0
12603.00	126.00		Convex Routing: Stream #1	573.5	571.1
20.583					
920.00	905.00		Subarea (UH) Added to Stream #2	0.0	19.7
16.333					
905.00	126.00		Flow-Through Basin: Stream #2	19.7	1.6
24.250	7.52				
126.00	126.00		Stream #2 Added to: Stream #1	571.1	572.7
20.583					
126.00	126.00		Zero Out: Stream #2	1.6	0.0
600.00	126.00		Subarea (UH) Added to Stream #2	0.0	1.7
16.500					
126.00	126.00		Stream #2 Added to: Stream #1	572.7	573.0
20.583					
126.00	126.00		Zero Out: Stream #2	1.7	0.0
126.00	12720.50		Convex Routing: Stream #1	573.0	571.7
20.750					
320.00	331.00		Subarea (UH) Added to Stream #2	0.0	103.9
16.417					
400.00	331.00		Subarea (UH) Added to Stream #3	0.0	57.2
16.333					
390.00	331.00		Subarea (UH) Added to Stream #4	0.0	1.8
16.667					
331.00	331.00		Stream #4 Added to: Stream #2	103.9	105.5
16.417					

331.00	331.00	Zero Out:	Stream #4	1.8	0.0
16.417					
331.00	331.00	Stream #3 Added to:	Stream #2	105.5	162.5
16.417					
331.00	331.00	Zero Out:	Stream #3	57.2	0.0
331.00	331.00	Flow-Through Basin:	Stream #2	162.5	81.8
17.500	54.19				
331.00	12720.50	Stream #2 Added to:	Stream #1	571.7	613.4
20.750					
12720.50	12720.50	Zero Out:	Stream #2	81.8	0.0
12720.50	127.00	Convex Routing:	Stream #1	613.4	612.2
20.833					
12710.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	3.7
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	612.2	612.8
20.833					
127.00	127.00	Zero Out:	Stream #2	3.7	0.0
50150.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	8.2
16.667					
127.00	127.00	Stream #2 Added to:	Stream #1	612.8	614.3
20.833					
127.00	127.00	Zero Out:	Stream #2	8.2	0.0
127.00	129.00	Convex Routing:	Stream #1	614.3	613.9
21.083					
50300.00	129.00	Subarea (UH) Added to:	Stream #2	0.0	7.6
16.667					
129.00	129.00	Stream #2 Added to:	Stream #1	613.9	615.3
21.083					
129.00	129.00	Zero Out:	Stream #2	7.6	0.0
210.00	221.00	Subarea (UH) Added to:	Stream #2	0.0	27.7
16.333					
221.00	221.00	Flowby Basin Model:	Stream #2	27.7	13.8
16.333					
221.00	223.00	Flow-Through Basin:	Stream #2	13.8	6.0
17.917	2.65				
221.00	223.00	Flow-Through Basin:	Stream #5	13.9	3.9
18.333	2.16				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0233UC.DAT ]
Page: 2 of |
-----+-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+
| 222.00 129.00| Stream #2 Added to: Stream #1| 615.3 619.2|
21.083 | | |
| 129.00 129.00| Zero Out: Stream #2| 6.0 0.0|
| | | |
| 129.00 133.00| Convex Routing: Stream #1| 619.2 618.8|
21.167 | | |
| 133.00 133.00| View: Stream #1| 618.8|
21.167 | 668.87| 3 |
-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV0234CC.DAT
TIME/DATE OF STUDY: 10:49 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.17; 30-MINUTE = 0.31; 1-HOUR = 0.43
3-HOUR = 0.81; 6-HOUR = 1.20; 24-HOUR = 2.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.17; 30-MINUTE = 0.31; 1-HOUR = 0.43
3-HOUR = 0.81; 6-HOUR = 1.20; 24-HOUR = 2.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.430 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.201; LOW LOSS FRACTION = 0.412  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39  
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.315 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.270; LOW LOSS FRACTION = 0.508  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39  
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.578 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.566; LOW LOSS FRACTION = 0.925  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39  
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

```

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
=====
*****
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
=====
*****
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
=====
*****
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
=====
*****
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
*****
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
*****
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****

```

```

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
*****
WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.472 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.586; LOW LOSS FRACTION = 0.976
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
*****
WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
*****

```

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.564; LOW LOSS FRACTION = 0.940
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.309 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.256; LOW LOSS FRACTION = 0.498
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 34.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00     24.73     14.750
12         11.00     37.17     16.920
13         12.00     57.63     19.160
14         13.00     83.32     21.500
15         14.00    112.96     23.940
16         15.00    133.28     26.480
17         16.00    144.34     29.150
18         17.00    154.45     31.950
19         18.00    163.94     34.870
20         19.00    172.92     37.940
21         20.00    181.39     41.140
22         21.00    189.45     44.500
23         22.00    197.22     48.010
24         23.00    466.70     51.740
25         24.00    951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01    CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.262 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.487; LOW LOSS FRACTION = 0.830
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

\*\*\*\*\*  
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.  
\*\*\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----  
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<  
-----

\*\*\*\*\*  
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.  
\*\*\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----  
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<  
-----

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<  
-----

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00  
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<  
-----

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.948 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.449; LOW LOSS FRACTION = 0.752  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39  
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.819  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39  
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.991 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.567; LOW LOSS FRACTION = 0.908  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.39  
3-HOUR = 0.65; 6-HOUR = 0.89; 24-HOUR = 1.51  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

```

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0234CC.DAT ]
Page: 1 of |
-----+-----
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----
| 10100.00  119.00| Subarea (UH) Added to Stream #1|      0.0    528.9|
20.417 | |
| 119.00    12603.00| Convex Routing:      Stream #1|    528.9    527.6|
20.500 | |
| 810.00    809.00| Subarea (UH) Added to Stream #2|      0.0    19.1|
16.250 | |
| 809.00    12603.00| Flow-Through Basin: Stream #2|    19.1     2.0|
24.167 | 7.94|
| 12603.00  12603.00| Stream #2 Added to:  Stream #1|    527.6    529.5|
20.500 | |
-----+-----
| 12603.00  12603.00| Zero Out:      Stream #2|      2.0     0.0|
|
| 12603.00  126.00| Convex Routing:      Stream #1|    529.5    528.7|
20.583 | |
| 920.00    905.00| Subarea (UH) Added to Stream #2|      0.0    17.7|
16.333 | |
| 905.00    126.00| Flow-Through Basin: Stream #2|    17.7     1.6|
24.250 | 7.30|
| 126.00    126.00| Stream #2 Added to:  Stream #1|    528.7    530.2|
20.583 | |
-----+-----
| 126.00    126.00| Zero Out:      Stream #2|      1.6     0.0|
|
| 600.00    126.00| Subarea (UH) Added to Stream #2|      0.0     1.5|
16.500 | |
| 126.00    126.00| Stream #2 Added to:  Stream #1|    530.2    530.5|
20.583 | |
| 126.00    126.00| Zero Out:      Stream #2|      1.5     0.0|
|
| 126.00    12720.50| Convex Routing:      Stream #1|    530.5    529.8|
20.750 | |
-----+-----
| 320.00    331.00| Subarea (UH) Added to Stream #2|      0.0    90.7|
16.417 | |
| 400.00    331.00| Subarea (UH) Added to Stream #3|      0.0    50.5|
16.417 | |
| 390.00    331.00| Subarea (UH) Added to Stream #4|      0.0     1.6|
16.667 | |
| 331.00    331.00| Flow-Through Basin: Stream #2|     90.7    13.2|
21.750 | 43.54|

```

331.00	331.00	Stream #4 Added to:	Stream #2	13.2	13.5
21.667					
+-----+-----+					
331.00	331.00	Zero Out:	Stream #4	1.6	0.0
331.00	331.00	Stream #3 Added to:	Stream #2	13.5	52.0
16.417					
331.00	331.00	Zero Out:	Stream #3	50.5	0.0
331.00	12720.50	Stream #2 Added to:	Stream #1	529.8	550.9
20.750					
12720.50	12720.50	Zero Out:	Stream #2	52.0	0.0
+-----+-----+					
12720.50	127.00	Convex Routing:	Stream #1	550.9	550.5
20.833					
12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	3.3
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	550.5	551.1
20.833					
127.00	127.00	Zero Out:	Stream #2	3.3	0.0
50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	7.5
16.667					
+-----+-----+					
127.00	127.00	Stream #2 Added to:	Stream #1	551.1	552.6
20.833					
127.00	127.00	Zero Out:	Stream #2	7.5	0.0
127.00	129.00	Convex Routing:	Stream #1	552.6	552.2
21.083					
50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	7.0
16.667					
129.00	129.00	Stream #2 Added to:	Stream #1	552.2	553.5
21.083					
+-----+-----+					
129.00	129.00	Zero Out:	Stream #2	7.0	0.0
210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	24.1
16.333					
221.00	221.00	Flowby Basin Model:	Stream #2	24.1	13.1
16.333					
221.00	223.00	Flow-Through Basin:	Stream #2	13.1	5.5
18.167	2.57				
221.00	222.00	Flow-Through Basin:	Stream #5	11.0	3.8
18.333	2.03				

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0234CC.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
223.00	222.00	5.5	9.3
222.00	222.00	3.8	0.0
222.00	129.00	553.5	560.9
129.00	129.00	9.3	0.0
129.00	133.00	560.9	560.8

223.00	222.00	Stream #5 Added to: Stream #2	5.5	9.3
222.00	222.00	Zero Out: Stream #5	3.8	0.0
222.00	129.00	Stream #2 Added to: Stream #1	553.5	560.9
129.00	129.00	Zero Out: Stream #2	9.3	0.0
129.00	133.00	Convex Routing: Stream #1	560.9	560.8

13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	138.0
132.00	132.00	Flowby Basin Model: Stream #2	138.0	138.0
132.00	132.00	Zero Out: Stream #3	0.0	0.0
132.00	132.00	Zero Out: Stream #4	0.0	0.0
132.00	13305.00	Convex Routing: Stream #2	138.0	136.6

13305.00	133.00	Convex Routing: Stream #2	136.6	136.0
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	73.1
133.00	133.00	Stream #3 Added to: Stream #2	136.0	198.7
133.00	133.00	Zero Out: Stream #3	73.1	0.0
133.00	133.00	Stream #2 Added to: Stream #1	560.8	643.5

133.00	133.00	Zero Out: Stream #2	198.7	0.0
133.00	134.00	Convex Routing: Stream #1	643.5	643.4
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	61.7
134.00	134.00	Stream #2 Added to: Stream #1	643.4	663.9

134.00	134.00	Zero Out: Stream #2	61.7	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	50.3
134.00	134.00	Stream #2 Added to: Stream #1	663.9	713.8
134.00	134.00	Zero Out: Stream #2	50.3	0.0
134.00	134.00	View: Stream #1		713.8

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EVO234UC.DAT
TIME/DATE OF STUDY: 10:50 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.17; 30-MINUTE = 0.32; 1-HOUR = 0.44
3-HOUR = 0.82; 6-HOUR = 1.22; 24-HOUR = 2.15
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 312.40; DOWNSTREAM ELEVATION (FT) = 286.00
CHANNEL LENGTH (FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.430 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.360 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.201; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.315 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.270; LOW LOSS FRACTION = 0.508
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

\*USER ENTERED "LAG" TIME = 0.578 HOURS  
 VALLEY(DEVELOPED) S-GRAPH SELECTED  
 MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.566; LOW LOSS FRACTION = 0.925  
 SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
 5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39  
 3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53  
 \*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
 5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
 3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7  
 -----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6  
 -----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7  
 -----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6  
 -----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.2  
 -----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
 THROUGH A FLOW-THROUGH DETENTION BASIN.  
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
 DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000

3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7  
 -----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6  
 -----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2  
 -----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
 UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
 CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
 CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1  
 -----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.472 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.586; LOW LOSS FRACTION = 0.976  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39  
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<  
=====

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.589 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39  
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<  
=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00  
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<  
=====

WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.622 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.564; LOW LOSS FRACTION = 0.940  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39  
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<  
=====

WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.309 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.256; LOW LOSS FRACTION = 0.498  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):

5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39  
 3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53  
 \*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
 5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
 3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2  
 -----

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<<

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	25.00	13.59
2	75.00	16.84
3	100.00	18.46
4	250.00	28.22
5	550.00	47.73

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5  
 =====

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1  
 -----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 2.070  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	0.031
3	2.00	0.83	1.240
4	3.00	5.60	2.600
5	4.00	16.88	4.130
6	5.00	23.48	5.790
7	6.00	36.73	7.560
8	7.00	55.95	9.440
9	8.00	78.70	11.430
10	9.00	228.67	12.460

\*\*\*\*\*

FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.1  
 -----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5

THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	1.84	0.260
3	2.00	3.22	1.160
4	3.00	4.16	2.520
5	4.00	4.94	3.990
6	5.00	5.60	5.550
7	6.00	7.17	7.200
8	7.00	14.13	8.950
9	8.00	18.54	10.800
10	9.00	21.90	12.740
11	10.00	24.73	14.750
12	11.00	37.17	16.920
13	12.00	57.63	19.160
14	13.00	82.32	21.500
15	14.00	112.96	23.940
16	15.00	133.28	26.480
17	16.00	144.34	29.150
18	17.00	154.45	31.950
19	18.00	163.94	34.870
20	19.00	172.92	37.940
21	20.00	181.39	41.140
22	21.00	189.45	44.500
23	22.00	197.22	48.010
24	23.00	466.70	51.740
25	24.00	951.81	53.820

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 223.00 TO NODE 222.00 IS CODE = 7  
 -----

>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 222.00 TO NODE 222.00 IS CODE = 6  
 -----

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*

```

*****
FLOW PROCESS FROM NODE 222.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 222.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
****ERROR-STREAM 2 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 213.00; DOWNSTREAM ELEVATION(FT) = 212.00
CHANNEL LENGTH(FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 1.262 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.487; LOW LOSS FRACTION = 0.830
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
          DATA PAIR           Qcenter           Qpass
          NUMBER              (CFS)              (CFS)
          -                   -                   -
          1                   413.00         413.00
          2                   1897.00        1613.00
          3                   4682.00        3013.00
          4                   6819.00        4013.00
          5                   8100.00        4613.00
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3
=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8
-----
>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----

```

```

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE =   6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE =  3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<
=====

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
      PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE =   7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<
=====

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
      PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE =   6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE    132.00 TO NODE    13305.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) =    0.01    CHANNEL Z =  3.00
UPSTREAM ELEVATION(FT) =    427.51; DOWNSTREAM ELEVATION(FT) =    315.00
CHANNEL LENGTH(FT) =    6877.24    MANNING'S FACTOR =  0.040
CONSTANT LOSS RATE(CFS) =    0.00
=====

```

```

CHANNEL LENGTH(FT) =    9760.05    MANNING'S FACTOR =  0.040
CONSTANT LOSS RATE(CFS) =    0.00
=====

*****
FLOW PROCESS FROM NODE    13305.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) =    0.01    CHANNEL Z =  3.00
UPSTREAM ELEVATION(FT) =    315.00; DOWNSTREAM ELEVATION(FT) =    212.00
CHANNEL LENGTH(FT) =    6877.24    MANNING'S FACTOR =  0.040
CONSTANT LOSS RATE(CFS) =    0.00
=====

*****
FLOW PROCESS FROM NODE    132.00 TO NODE    133.00 IS CODE =   1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<
=====
WATERSHED AREA =    1713.900 ACRES; BASEFLOW =    0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME =    0.948 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) =  0.449; LOW LOSS FRACTION =  0.752
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE =  0.14; 30-MINUTE =  0.30; 1-HOUR =  0.39
3-HOUR =  0.66; 6-HOUR =  0.90; 24-HOUR =  1.53
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE =  0.304; 30-MINUTE =  0.358; 1-HOUR =  0.405
3-HOUR =  0.750; 6-HOUR =  0.890; 24-HOUR =  0.936

*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE =   7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<
=====

*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE =   6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE =   7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

```

```

=====
*****
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.448 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.819
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.39
3-HOUR = 0.66; 6-HOUR = 0.90; 24-HOUR = 1.53
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0234UC.DAT ]
Page: 1 of 1
+-----+
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
+-----+
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0    538.4|
20.417 |
| 119.00     12603.00| Convex Routing:      Stream #1|    538.4    537.0|
20.500 |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0     16.6|
16.250 |
| 12603.00   12603.00| Stream #2 Added to:  Stream #1|    537.0    539.3|
20.500 |
| 12603.00   12603.00| Zero Out:           Stream #2|     16.6     0.0|
|
+-----+
| 12603.00   126.00| Convex Routing:      Stream #1|    539.3    538.4|
20.583 |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0     18.5|
16.333 |
| 126.00     126.00| Stream #2 Added to:  Stream #1|    538.4    541.2|
20.583 |
| 126.00     126.00| Zero Out:           Stream #2|     18.5     0.0|
|
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0     1.6|
16.500 |
+-----+
| 126.00     126.00| Stream #2 Added to:  Stream #1|    541.2    541.4|
20.583 |
| 126.00     126.00| Zero Out:           Stream #2|      1.6     0.0|
|
| 126.00     12720.50| Convex Routing:      Stream #1|    541.4    540.7|
20.750 |
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0     95.2|
16.417 |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0     52.7|
16.333 |
+-----+
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0     1.7|
16.667 |
| 331.00     331.00| Stream #4 Added to:  Stream #2|     95.2    96.7|
16.417 |
| 331.00     331.00| Zero Out:           Stream #4|      1.7     0.0|
|
| 331.00     331.00| Stream #3 Added to:  Stream #2|     96.7    149.1|
16.417 |

```

```

| 331.00     331.00| Zero Out:           Stream #3|     52.7     0.0|
|
+-----+
| 331.00     331.00| Flow-Through Basin: Stream #2|    149.1    76.1|
17.583 |
| 331.00     12720.50| Stream #2 Added to:  Stream #1|    540.7    583.7|
20.000 |
| 12720.50   12720.50| Zero Out:           Stream #2|     76.1     0.0|
|
| 12720.50   127.00| Convex Routing:      Stream #1|    583.7    583.1|
20.083 |
| 12710.00   127.00| Subarea (UH) Added to Stream #2|      0.0     3.5|
16.500 |
+-----+
| 127.00     127.00| Stream #2 Added to:  Stream #1|    583.1    583.8|
20.083 |
| 127.00     127.00| Zero Out:           Stream #2|      3.5     0.0|
|
| 50150.00   127.00| Subarea (UH) Added to Stream #2|      0.0     7.8|
16.667 |
| 127.00     127.00| Stream #2 Added to:  Stream #1|    583.8    585.5|
20.083 |
| 127.00     127.00| Zero Out:           Stream #2|      7.8     0.0|
|
+-----+
| 127.00     129.00| Convex Routing:      Stream #1|    585.5    584.7|
20.333 |
| 50300.00   129.00| Subarea (UH) Added to Stream #2|      0.0     7.2|
16.667 |
| 129.00     129.00| Stream #2 Added to:  Stream #1|    584.7    586.3|
20.333 |
| 129.00     129.00| Zero Out:           Stream #2|      7.2     0.0|
|
| 210.00     221.00| Subarea (UH) Added to Stream #2|      0.0    25.2|
16.333 |
+-----+
| 221.00     221.00| Flowby Basin Model: Stream #2|     25.2    13.6|
16.333 |
| 221.00     223.00| Flow-Through Basin: Stream #2|     13.6     5.6|
18.083 |
| 221.00     222.00| Flow-Through Basin: Stream #5|     11.6     3.9|
18.333 |
| 223.00     222.00| Stream #5 Added to:  Stream #2|      5.6     9.5|
18.167 |
| 222.00     222.00| Zero Out:           Stream #5|      3.9     0.0|
|
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
+-----+

```

```

+-----+
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0234UC.DAT ]
Page: 2 of |
+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
+-----+
| 222.00    129.00| Stream #2 Added to: Stream #1| 586.3    594.3|
20.333 |
| 129.00    129.00| Zero Out: Stream #2| 9.5      0.0|
|
| 129.00    129.00| Zero Out: Stream #2| 0.0      0.0|
|
| 129.00    133.00| Convex Routing: Stream #1| 594.3    593.8|
20.417 |
| 13010.00   132.00| Subarea (UH) Added to Stream #2| 0.0      141.9|
17.333 |
+-----+
| 132.00    132.00| Flowby Basin Model: Stream #2| 141.9    141.9|
17.333 |
| 132.00    132.00| Zero Out: Stream #3| 0.0      0.0|
|
| 132.00    132.00| Zero Out: Stream #4| 0.0      0.0|
|
| 132.00    13305.00| Convex Routing: Stream #2| 141.9    140.3|
17.917 |
| 13305.00   133.00| Convex Routing: Stream #2| 140.3    139.7|
18.250 |
+-----+
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0      75.3|
17.000 |
| 133.00    133.00| Stream #3 Added to: Stream #2| 139.7    203.7|
17.167 |
| 133.00    133.00| Zero Out: Stream #3| 75.3     0.0|
|
| 133.00    133.00| Stream #2 Added to: Stream #1| 593.8    714.4|
18.417 |
| 133.00    133.00| Zero Out: Stream #2| 203.7    0.0|
|
+-----+
| 133.00    134.00| Convex Routing: Stream #1| 714.4    714.0|
18.667 |
| 133.00    134.00| Subarea (UH) Added to Stream #2| 0.0      63.9|
16.500 |
| 134.00    134.00| Stream #2 Added to: Stream #1| 714.0    736.9|
18.417 |
| 134.00    134.00| Zero Out: Stream #2| 63.9     0.0|
|

```

| 134.00 134.00| View: Stream #1| 736.9|  
18.417 | 837.41| 3 |

+-----+-----+-----+-----+-----+  
-----+-----+-----+-----+-----+  
+-----+-----+-----+-----+-----+  
-----+-----+-----+-----+-----+  
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT  
INTERVAL |  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF  
THE DESIGN STORM |  
+-----+-----+-----+-----+-----+  
-----+-----+-----+-----+-----+

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV0533CC.DAT
TIME/DATE OF STUDY: 10:00 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.45; 1-HOUR = 0.64
3-HOUR = 1.18; 6-HOUR = 1.76; 24-HOUR = 3.11
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.330 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167; LOW LOSS FRACTION = 0.352  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.284 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.447  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472; LOW LOSS FRACTION = 0.863  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.370 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.489; LOW LOSS FRACTION = 0.949  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.447 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.444 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.470; LOW LOSS FRACTION = 0.908
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.286 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.213; LOW LOSS FRACTION = 0.446
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01    CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.986 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.406; LOW LOSS FRACTION = 0.789
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

```

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8
-----
>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

```

```

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<
=====

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.699 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.375; LOW LOSS FRACTION = 0.691  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0533CC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	2327.2	
19.333					
119.00	12603.00	Convex Routing: Stream #1	2327.2	2303.6	
19.417					
810.00	809.00	Subarea (UH) Added to Stream #2	0.0	34.1	
16.250					
809.00	12603.00	Flow-Through Basin: Stream #2	34.1	2.2	
24.083	9.36				
12603.00	12603.00	Stream #2 Added to: Stream #1	2303.6	2305.8	
19.417					
12603.00	12603.00	Zero Out: Stream #2	2.2	0.0	
12603.00	126.00	Convex Routing: Stream #1	2305.8	2291.3	
19.250					
920.00	905.00	Subarea (UH) Added to Stream #2	0.0	59.5	
16.333					
905.00	126.00	Flow-Through Basin: Stream #2	59.5	17.8	
17.417	10.83				
126.00	126.00	Stream #2 Added to: Stream #1	2291.3	2305.6	
19.250					
126.00	126.00	Zero Out: Stream #2	17.8	0.0	
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	12.7	
16.417					
126.00	126.00	Stream #2 Added to: Stream #1	2305.6	2306.3	
19.250					
126.00	126.00	Zero Out: Stream #2	12.7	0.0	
126.00	12720.50	Convex Routing: Stream #1	2306.3	2300.7	
19.583					
320.00	331.00	Subarea (UH) Added to Stream #2	0.0	163.4	
16.417					
400.00	331.00	Subarea (UH) Added to Stream #3	0.0	98.8	
16.333					
390.00	331.00	Subarea (UH) Added to Stream #4	0.0	7.3	
16.500					
331.00	331.00	Stream #4 Added to: Stream #2	163.4	170.0	
16.417					

331.00	331.00	Zero Out: Stream #4	7.3	0.0	
331.00	331.00	Stream #3 Added to: Stream #2	170.0	263.2	
16.333					
331.00	331.00	Zero Out: Stream #3	98.8	0.0	
331.00	331.00	Flow-Through Basin: Stream #2	263.2	185.4	
16.667	60.41				
331.00	12720.50	Stream #2 Added to: Stream #1	2300.7	2383.0	
18.500					
12720.50	12720.50	Zero Out: Stream #2	185.4	0.0	
12720.50	127.00	Convex Routing: Stream #1	2383.0	2378.5	
18.583					
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	35.3	
16.417					
127.00	127.00	Stream #2 Added to: Stream #1	2378.5	2381.7	
18.583					
127.00	127.00	Zero Out: Stream #2	35.3	0.0	
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	52.9	
16.500					
127.00	127.00	Stream #2 Added to: Stream #1	2381.7	2390.6	
18.583					
127.00	127.00	Zero Out: Stream #2	52.9	0.0	
127.00	129.00	Convex Routing: Stream #1	2390.6	2380.1	
18.750					
50300.00	129.00	Subarea (UH) Added to Stream #2	0.0	34.7	
16.500					
129.00	129.00	Stream #2 Added to: Stream #1	2380.1	2384.9	
18.750					
129.00	129.00	Zero Out: Stream #2	34.7	0.0	
210.00	221.00	Subarea (UH) Added to Stream #2	0.0	46.1	
16.333					
221.00	221.00	Flowby Basin Model: Stream #2	46.1	15.0	
16.333					
221.00	223.00	Flow-Through Basin: Stream #2	15.0	11.9	
17.417	3.46				
221.00	222.00	Flow-Through Basin: Stream #5	31.1	5.2	
18.417	4.57				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0533CC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|    11.9    17.0|
17.417 |                |
| 222.00    222.00| Zero Out:           Stream #5|     5.2     0.0|
|                |
| 222.00    129.00| Stream #2 Added to:  Stream #1|   2384.9   2399.8|
18.750 |                |
| 129.00    129.00| Zero Out:           Stream #2|     17.0     0.0|
|                |
| 129.00    133.00| Convex Routing:     Stream #1|   2399.8   2395.5|
18.833 |                |
-----+-----+-----+-----+
| 13010.00   132.00| Subarea (UH) Added to Stream #2|     0.0    321.1|
17.000 |                |
| 132.00    132.00| Flowby Basin Model:  Stream #2|   321.1    321.1|
17.000 |                |
| 132.00    132.00| Zero Out:           Stream #3|     0.0     0.0|
|                |
| 132.00    132.00| Zero Out:           Stream #4|     0.0     0.0|
|                |
| 132.00    13305.00| Convex Routing:     Stream #2|   321.1    312.2|
17.500 |                |
-----+-----+-----+-----+
| 13305.00   133.00| Convex Routing:     Stream #2|   312.2    310.3|
17.833 |                |
| 132.00    133.00| Subarea (UH) Added to Stream #3|     0.0    162.7|
16.750 |                |
| 133.00    133.00| Stream #3 Added to:  Stream #2|   310.3    419.4|
17.667 |                |
| 133.00    133.00| Zero Out:           Stream #3|   162.7     0.0|
|                |
| 133.00    133.00| Stream #2 Added to:  Stream #1|   2395.5   2699.8|
18.417 |                |
-----+-----+-----+-----+
| 133.00    133.00| Zero Out:           Stream #2|   419.4     0.0|
|                |
| 133.00    133.00| View:               Stream #1|                2699.8|
18.417 | 2391.74| 3 |
-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL

```

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF  
THE DESIGN STORM |

+-----+  
-----+

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV JUNE 2023 ROKAMOTO \*

FILE NAME: EV0533TC.DAT
TIME/DATE OF STUDY: 15:38 06/29/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.986 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.406; LOW LOSS FRACTION = 0.789
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57
3-HOUR = 0.96; 6-HOUR = 1.32; 24-HOUR = 2.21
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qenter (CFS), Qpass (CFS). Rows include values for 1 and 2.

Table with 3 columns: Node, Value 1, Value 2. Rows 3, 4, 5.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 5.700
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-9.

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1  
-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400
3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900

11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00  
CHANNEL LENGTH (FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.699 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.375; LOW LOSS FRACTION = 0.691
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57
3-HOUR = 0.96; 6-HOUR = 1.32; 24-HOUR = 2.21
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

Table with columns: TIME (2) TO, NODE #, MODELED (AF), HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), FOOTNOTES. Includes summary header: \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT  
INTERVAL |  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF  
THE DESIGN STORM |

+-----+  
-----+

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV0533UC.DAT
TIME/DATE OF STUDY: 10:01 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.45; 1-HOUR = 0.64
3-HOUR = 1.18; 6-HOUR = 1.76; 24-HOUR = 3.10
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.330 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167; LOW LOSS FRACTION = 0.352  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.284 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.447  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472; LOW LOSS FRACTION = 0.863  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.370 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.489; LOW LOSS FRACTION = 0.949  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.447 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.444 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.470; LOW LOSS FRACTION = 0.908
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.286 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.213; LOW LOSS FRACTION = 0.446
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.18
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
          DATA PAIR           Qcenter           Qpass
          NUMBER              (CFS)              (CFS)
          -                   0.00              0.00
          1                   25.00             13.59
          2                   75.00             16.84
          3                   100.00            18.46
          4                   250.00            28.22
          5                   550.00            47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
          INTERVAL    DEPTH    OUTFLOW    STORAGE
          NUMBER      (FT)    (CFS)     (AF)
          1           0.00     0.00     0.000
          2           1.00     0.01     0.310
          3           2.00     0.83     1.240
          4           3.00     5.60     2.600
          5           4.00    16.88     4.130
          6           5.00    23.48     5.790
          7           6.00    36.73     7.560
          8           7.00    55.95     9.440
          9           8.00    78.70    11.430
         10          9.00   228.67    12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

   INTERVAL   DEPTH   OUTFLOW   STORAGE
   NUMBER     (FT)   (CFS)     (AF)
   -----
1           0.00     0.00     0.000
2           1.00     1.84     0.260
3           2.00     3.22     1.160
4           3.00     4.16     2.520
5           4.00     4.94     3.990
6           5.00     5.60     5.550
7           6.00     7.17     7.200
8           7.00    14.13    8.950
9           8.00    18.54   10.800
10          9.00    21.90   12.740
11         10.00    24.73   14.750
12         11.00    37.17   16.920
13         12.00    57.63   19.160
14         13.00    83.32   21.500
15         14.00   112.96   23.940
16         15.00   133.28   26.480
17         16.00   144.34   29.150
18         17.00   154.45   31.950
19         18.00   163.94   34.870
20         19.00   172.92   37.940
21         20.00   181.39   41.140
22         21.00   189.45   44.500
23         22.00   197.22   48.010
24         23.00   466.70   51.740
25         24.00   951.81   53.820
-----
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) =      0.01   CHANNEL Z =      3.00
UPSTREAM ELEVATION (FT) =      213.00; DOWNSTREAM ELEVATION (FT) =      212.00
CHANNEL LENGTH (FT) =      1389.52   MANNING'S FACTOR =      0.030
CONSTANT LOSS RATE (CFS) =      0.00
=====
*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0533UC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	2432.6
19.333				
119.00	12603.00	Convex Routing: Stream #1	2432.6	2404.0
19.417				
810.00	809.00	Subarea (UH) Added to Stream #2	0.0	35.2
16.250				
809.00	12603.00	Flow-Through Basin: Stream #2	35.2	2.2
24.083	9.40			
12603.00	12603.00	Stream #2 Added to: Stream #1	2404.0	2406.2
19.417				
12603.00	12603.00	Zero Out: Stream #2	2.2	0.0
12603.00	126.00	Convex Routing: Stream #1	2406.2	2384.1
19.500				
920.00	905.00	Subarea (UH) Added to Stream #2	0.0	61.2
16.333				
905.00	126.00	Flow-Through Basin: Stream #2	61.2	18.0
17.417	10.89			
126.00	126.00	Stream #2 Added to: Stream #1	2384.1	2397.6
19.500				
126.00	126.00	Zero Out: Stream #2	18.0	0.0
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	13.0
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	2397.6	2398.3
19.500				
126.00	126.00	Zero Out: Stream #2	13.0	0.0
126.00	12720.50	Convex Routing: Stream #1	2398.3	2396.5
19.583				
320.00	331.00	Subarea (UH) Added to Stream #2	0.0	167.8
16.417				
400.00	331.00	Subarea (UH) Added to Stream #3	0.0	102.0
16.333				
390.00	331.00	Subarea (UH) Added to Stream #4	0.0	7.5
16.500				
331.00	331.00	Stream #4 Added to: Stream #2	167.8	174.7
16.417				

331.00	331.00	Zero Out: Stream #4	7.5	0.0
331.00	331.00	Stream #3 Added to: Stream #2	174.7	272.2
16.333				
331.00	331.00	Zero Out: Stream #3	102.0	0.0
331.00	331.00	Flow-Through Basin: Stream #2	272.2	188.8
16.667	60.62			
331.00	12720.50	Stream #2 Added to: Stream #1	2396.5	2460.4
19.583				
12720.50	12720.50	Zero Out: Stream #2	188.8	0.0
12720.50	127.00	Convex Routing: Stream #1	2460.4	2458.4
19.583				
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	36.3
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	2458.4	2460.7
19.583				
127.00	127.00	Zero Out: Stream #2	36.3	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	54.5
16.500				
127.00	127.00	Stream #2 Added to: Stream #1	2460.7	2466.4
19.500				
127.00	127.00	Zero Out: Stream #2	54.5	0.0
127.00	129.00	Convex Routing: Stream #1	2466.4	2465.1
19.750				
50300.00	129.00	Subarea (UH) Added to Stream #2	0.0	35.7
16.500				
129.00	129.00	Stream #2 Added to: Stream #1	2465.1	2468.6
19.750				
129.00	129.00	Zero Out: Stream #2	35.7	0.0
210.00	221.00	Subarea (UH) Added to Stream #2	0.0	47.5
16.333				
221.00	221.00	Flowby Basin Model: Stream #2	47.5	15.1
16.333				
221.00	223.00	Flow-Through Basin: Stream #2	15.1	11.9
17.417	3.46			
221.00	222.00	Flow-Through Basin: Stream #5	32.5	5.2
18.417	4.62			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+
-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0533UC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00 222.00| Stream #5 Added to: Stream #2| 11.9 17.0|
17.417 | | |
| 222.00 222.00| Zero Out: Stream #5| 5.2 0.0|
| | | |
| 222.00 129.00| Stream #2 Added to: Stream #1| 2468.6 2480.9|
19.750 | | |
| 129.00 129.00| Zero Out: Stream #2| 17.0 0.0|
| | | |
| 129.00 133.00| Convex Routing: Stream #1| 2480.9 2479.0|
19.750 | | |
-----+-----+-----+-----+
| 133.00 133.00| View: Stream #1| 2479.0|
19.750 | 2139.82| 3 |
-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
-----+-----+-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV0534CC.DAT
TIME/DATE OF STUDY: 09:59 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.46; 1-HOUR = 0.65
3-HOUR = 1.20; 6-HOUR = 1.79; 24-HOUR = 3.16
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.330 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167; LOW LOSS FRACTION = 0.352  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57  
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.284 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.447  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57  
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472; LOW LOSS FRACTION = 0.863  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57  
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.370 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.489; LOW LOSS FRACTION = 0.949  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57  
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.447 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57  
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.444 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.470; LOW LOSS FRACTION = 0.908
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.286 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.213; LOW LOSS FRACTION = 0.446
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
          DATA PAIR          Qcenter          Qpass
          NUMBER              (CFS)              (CFS)
          -                   0.00              0.00
          1                   25.00             13.59
          2                   75.00             16.84
          3                   100.00            18.46
          4                   250.00            28.22
          5                   550.00            47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
          INTERVAL          DEPTH          OUTFLOW          STORAGE
          NUMBER            (FT)            (CFS)            (AF)
          1                  0.00             0.00             0.000
          2                  1.00             0.01             0.310
          3                  2.00             0.83             1.240
          4                  3.00             5.60             2.600
          5                  4.00            16.88             4.130
          6                  5.00            23.48             5.790
          7                  6.00            36.73             7.560
          8                  7.00            55.95             9.440
          9                  8.00            78.70            11.430
          10                 9.00           228.67            12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01    CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.986 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.406; LOW LOSS FRACTION = 0.789
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

\*\*\*\*\*  
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.  
\*\*\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----  
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<  
-----

\*\*\*\*\*  
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.  
\*\*\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----  
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<  
-----

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<  
-----

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00  
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<  
-----

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.699 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.375; LOW LOSS FRACTION = 0.691  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57  
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.390 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.409; LOW LOSS FRACTION = 0.762  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57  
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.180 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.473; LOW LOSS FRACTION = 0.843  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.57  
3-HOUR = 0.96; 6-HOUR = 1.33; 24-HOUR = 2.22  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

-----+  
| \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*  
|

| INPUT FILENAME: [EV0534CC.DAT ]

Page: 1 of |

-----+-----+-----+  
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|  
TIME (2) TO | MAX. STORAGE| |  
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS) |  
PEAK (HR) | MODELED (AF) | FOOTNOTES |

-----+-----+-----+  
| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 2295.7|  
19.333 | |

| 119.00 12603.00| Convex Routing: Stream #1| 2295.7 2274.4|

19.417 | |

| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 32.4|

16.250 | |

| 809.00 12603.00| Flow-Through Basin: Stream #2| 32.4 2.2|

24.167 | 9.49|

| 12603.00 12603.00| Stream #2 Added to: Stream #1| 2274.4 2276.6|

19.417 | |

-----+-----+-----+  
| 12603.00 12603.00| Zero Out: Stream #2| 2.2 0.0|

| 12603.00 126.00| Convex Routing: Stream #1| 2276.6 2267.1|

19.250 | |

| 920.00 905.00| Subarea (UH) Added to Stream #2| 0.0 54.4|

16.333 | |

| 905.00 126.00| Flow-Through Basin: Stream #2| 54.4 17.7|

17.500 | 10.80|

| 126.00 126.00| Stream #2 Added to: Stream #1| 2267.1 2281.5|

19.250 | |

-----+-----+-----+  
| 126.00 126.00| Zero Out: Stream #2| 17.7 0.0|

| 600.00 126.00| Subarea (UH) Added to Stream #2| 0.0 11.0|

16.417 | |

| 126.00 126.00| Stream #2 Added to: Stream #1| 2281.5 2282.3|

19.250 | |

| 126.00 126.00| Zero Out: Stream #2| 11.0 0.0|

| 126.00 12720.50| Convex Routing: Stream #1| 2282.3 2275.4|

19.333 | |

-----+-----+-----+  
| 320.00 331.00| Subarea (UH) Added to Stream #2| 0.0 157.9|

16.417 | |

| 400.00 331.00| Subarea (UH) Added to Stream #3| 0.0 95.2|

16.333 | |

| 390.00 331.00| Subarea (UH) Added to Stream #4| 0.0 6.7|

16.500 | |

| 331.00 331.00| Stream #4 Added to: Stream #2| 157.9 164.0|

16.417 | |

	331.00	331.00	Zero Out:	Stream #4	6.7	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	164.0	255.1
16.333						
	331.00	331.00	Zero Out:	Stream #3	95.2	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	255.1	181.7
16.583		60.19				
	331.00	12720.50	Stream #2 Added to:	Stream #1	2275.4	2370.6
18.500						
	12720.50	12720.50	Zero Out:	Stream #2	181.7	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	2370.6	2366.6
18.583						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	30.7
16.417						
	127.00	127.00	Stream #2 Added to:	Stream #1	2366.6	2369.8
18.583						
	127.00	127.00	Zero Out:	Stream #2	30.7	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	47.0
16.500						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	2369.8	2379.0
18.583						
	127.00	127.00	Zero Out:	Stream #2	47.0	0.0
	127.00	129.00	Convex Routing:	Stream #1	2379.0	2369.2
18.750						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	31.1
16.500						
	129.00	129.00	Stream #2 Added to:	Stream #1	2369.2	2374.1
18.750						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	31.1	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	44.4
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	44.4	14.9
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	14.9	12.0
17.417		3.47				
	221.00	222.00	Flow-Through Basin:	Stream #5	29.6	5.2
18.417		4.60				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV0534CC.DAT ]

Page: 2 of

UPSTREAM TIME (2)	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
223.00	222.00	12.0	17.1
222.00	222.00	5.2	0.0
222.00	129.00	2374.1	2389.2
129.00	129.00	17.1	0.0
129.00	133.00	2389.2	2385.3

17.500		Stream #5 Added to: Stream #2	12.0	17.1
222.00	222.00	Zero Out: Stream #5	5.2	0.0
18.750		Stream #2 Added to: Stream #1	2374.1	2389.2
129.00	129.00	Zero Out: Stream #2	17.1	0.0
18.833		Convex Routing: Stream #1	2389.2	2385.3

17.000		Subarea (UH) Added to Stream #2	0.0	306.2
17.000		Flowby Basin Model: Stream #2	306.2	306.2
		Zero Out: Stream #3	0.0	0.0
		Zero Out: Stream #4	0.0	0.0
17.500		Convex Routing: Stream #2	306.2	298.7

17.833		Convex Routing: Stream #2	298.7	297.2
16.750		Subarea (UH) Added to Stream #3	0.0	155.5
17.667		Stream #3 Added to: Stream #2	297.2	406.4
		Zero Out: Stream #3	155.5	0.0
18.417		Stream #2 Added to: Stream #1	2385.3	2693.5

		Zero Out: Stream #2	406.4	0.0
18.583		Convex Routing: Stream #1	2693.5	2690.7
16.417		Subarea (UH) Added to Stream #2	0.0	152.0
18.500		Stream #2 Added to: Stream #1	2690.7	2729.0

134.00	134.00	Zero Out: Stream #2	152.0	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	148.0
18.083		Stream #2 Added to: Stream #1	2729.0	2873.3
18.583		Zero Out: Stream #2	148.0	0.0
18.583		View: Stream #1		2873.3

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV NOV 2023 ROKAMOTO \*

FILE NAME: EV0534UC.DAT
TIME/DATE OF STUDY: 10:00 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.46; 1-HOUR = 0.65
3-HOUR = 1.21; 6-HOUR = 1.80; 24-HOUR = 3.17
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.330 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167; LOW LOSS FRACTION = 0.352  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58  
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.284 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.447  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58  
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

----->>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472; LOW LOSS FRACTION = 0.863  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58  
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.370 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.489; LOW LOSS FRACTION = 0.949  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58  
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.447 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58  
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.444 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.470; LOW LOSS FRACTION = 0.908
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.286 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.213; LOW LOSS FRACTION = 0.446
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
          DATA PAIR          Qcenter          Qpass
          NUMBER              (CFS)              (CFS)
          -                   0.00              0.00
          1                   25.00             13.59
          2                   75.00             16.84
          3                   100.00            18.46
          4                   250.00            28.22
          5                   550.00            47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
          INTERVAL          DEPTH          OUTFLOW          STORAGE
          NUMBER            (FT)          (CFS)          (AF)
          1                  0.00          0.00          0.000
          2                  1.00          0.01          0.310
          3                  2.00          0.83          1.240
          4                  3.00          5.60          2.600
          5                  4.00          16.88          4.130
          6                  5.00          23.48          5.790
          7                  6.00          36.73          7.560
          8                  7.00          55.95          9.440
          9                  8.00          78.70          11.430
          10                 9.00          228.67         12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.986 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.406; LOW LOSS FRACTION = 0.789
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

```

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8
-----
>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

```

```

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<
=====
*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.699 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.375; LOW LOSS FRACTION = 0.691  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58  
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.390 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.409; LOW LOSS FRACTION = 0.762  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.43; 1-HOUR = 0.58  
3-HOUR = 0.97; 6-HOUR = 1.33; 24-HOUR = 2.23  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11  
\*\*\*\*\*

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

```

+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0534UC.DAT ]
Page: 1 of 1
+-----+
|UPSTREAM DOWNSTREAM| UPSTREAM DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) | PEAK (CFS) |
PEAK (HR)  | MODELED (AF) | FOOTNOTES |
+-----+
| 10100.00  119.00| Subarea (UH) Added to Stream #1|      0.0  | 2364.5|
19.333 |
| 119.00    12603.00| Convex Routing:      Stream #1| 2364.5  | 2340.3|
19.417 |
| 810.00    809.00| Subarea (UH) Added to Stream #2|      0.0  | 33.8|
16.250 |
| 809.00    12603.00| Flow-Through Basin: Stream #2| 33.8    | 2.2|
24.167 | 9.57|
| 12603.00  12603.00| Stream #2 Added to: Stream #1| 2340.3  | 2342.4|
19.417 |
+-----+
| 12603.00  12603.00| Zero Out:      Stream #2|      2.2  | 0.0|
|
| 12603.00  126.00| Convex Routing:      Stream #1| 2342.4  | 2328.0|
19.250 |
| 920.00    905.00| Subarea (UH) Added to Stream #2|      0.0  | 58.2|
16.333 |
| 905.00    126.00| Flow-Through Basin: Stream #2| 58.2    | 18.0|
17.417 | 10.93|
| 126.00    126.00| Stream #2 Added to: Stream #1| 2328.0  | 2342.8|
19.250 |
+-----+
| 126.00    126.00| Zero Out:      Stream #2|      18.0 | 0.0|
|
| 600.00    126.00| Subarea (UH) Added to Stream #2|      0.0  | 12.2|
16.417 |
| 126.00    126.00| Stream #2 Added to: Stream #1| 2342.8  | 2343.6|
19.250 |
| 126.00    126.00| Zero Out:      Stream #2|      12.2 | 0.0|
|
| 126.00    12720.50| Convex Routing:      Stream #1| 2343.6  | 2337.6|
19.583 |
+-----+
| 320.00    331.00| Subarea (UH) Added to Stream #2|      0.0  | 163.4|
16.417 |
| 400.00    331.00| Subarea (UH) Added to Stream #3|      0.0  | 98.6|
16.333 |
| 390.00    331.00| Subarea (UH) Added to Stream #4|      0.0  | 7.2|
16.500 |
| 331.00    331.00| Stream #4 Added to: Stream #2| 163.4   | 169.9|
16.417 |

```

```

| 331.00    331.00| Zero Out:      Stream #4|      7.2  | 0.0|
|
+-----+
| 331.00    331.00| Stream #3 Added to: Stream #2| 169.9   | 263.5|
16.333 |
| 331.00    331.00| Zero Out:      Stream #3|      98.6  | 0.0|
|
| 331.00    331.00| Flow-Through Basin: Stream #2| 263.5   | 187.6|
16.667 | 60.55|
| 331.00    12720.50| Stream #2 Added to: Stream #1| 2337.6  | 2422.0|
18.500 |
| 12720.50  12720.50| Zero Out:      Stream #2|      187.6 | 0.0|
|
+-----+
| 12720.50  127.00| Convex Routing:      Stream #1| 2422.0  | 2417.5|
18.583 |
| 12710.00  127.00| Subarea (UH) Added to Stream #2|      0.0  | 34.0|
16.417 |
| 127.00    127.00| Stream #2 Added to: Stream #1| 2417.5  | 2420.7|
18.583 |
| 127.00    127.00| Zero Out:      Stream #2|      34.0  | 0.0|
|
| 50150.00  127.00| Subarea (UH) Added to Stream #2|      0.0  | 51.4|
16.500 |
+-----+
| 127.00    127.00| Stream #2 Added to: Stream #1| 2420.7  | 2429.8|
18.583 |
| 127.00    127.00| Zero Out:      Stream #2|      51.4  | 0.0|
|
| 127.00    129.00| Convex Routing:      Stream #1| 2429.8  | 2419.0|
18.750 |
| 50300.00  129.00| Subarea (UH) Added to Stream #2|      0.0  | 33.8|
16.500 |
| 129.00    129.00| Stream #2 Added to: Stream #1| 2419.0  | 2424.0|
18.750 |
+-----+
| 129.00    129.00| Zero Out:      Stream #2|      33.8  | 0.0|
|
| 210.00    221.00| Subarea (UH) Added to Stream #2|      0.0  | 46.0|
16.333 |
| 221.00    221.00| Flowby Basin Model: Stream #2| 46.0    | 15.0|
16.333 |
| 221.00    223.00| Flow-Through Basin: Stream #2| 15.0    | 12.0|
17.417 | 3.47|
| 221.00    222.00| Flow-Through Basin: Stream #5| 31.0    | 5.2|
18.417 | 4.70|
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
+-----+

```

```

+-----+
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0534UC.DAT ]
Page: 2 of |
+-----+
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|      12.0    17.2|
17.417 |
| 222.00    222.00| Zero Out:           Stream #5|      5.2     0.0|
|
| 222.00    129.00| Stream #2 Added to:  Stream #1|     2424.0   2439.0|
18.750 |
| 129.00    129.00| Zero Out:           Stream #2|      17.2     0.0|
|
| 129.00    133.00| Convex Routing:     Stream #1|     2439.0   2434.7|
18.833 |
+-----+
| 13010.00   132.00| Subarea (UH) Added to Stream #2|      0.0    320.6|
17.000 |
| 132.00    132.00| Flowby Basin Model: Stream #2|     320.6   320.6|
17.000 |
| 132.00    132.00| Zero Out:           Stream #3|      0.0     0.0|
|
| 132.00    132.00| Zero Out:           Stream #4|      0.0     0.0|
|
| 132.00    13305.00| Convex Routing:     Stream #2|     320.6   312.2|
17.500 |
+-----+
| 13305.00   133.00| Convex Routing:     Stream #2|     312.2   310.4|
17.833 |
| 132.00    133.00| Subarea (UH) Added to Stream #3|      0.0    162.6|
16.750 |
| 133.00    133.00| Stream #3 Added to: Stream #2|     310.4   421.2|
17.667 |
| 133.00    133.00| Zero Out:           Stream #3|     162.6     0.0|
|
| 133.00    133.00| Stream #2 Added to: Stream #1|     2434.7   2742.7|
18.417 |
+-----+
| 133.00    133.00| Zero Out:           Stream #2|     421.2     0.0|
|
| 133.00    134.00| Convex Routing:     Stream #1|     2742.7   2739.7|
18.583 |
| 133.00    134.00| Subarea (UH) Added to Stream #2|      0.0    160.4|
16.500 |
| 134.00    134.00| Stream #2 Added to: Stream #1|     2739.7   2777.8|
18.500 |

```

	134.00	134.00	Zero Out:	Stream #2	160.4	0.0
+-----+-----+-----+-----+-----+						
	134.00	134.00	View:	Stream #1	2777.8	
18.500		2509.09	3			
+-----+-----+-----+-----+-----+						
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT						
INTERVAL						
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF						
THE DESIGN STORM						
+-----+-----+-----+-----+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV1033CC.DAT
TIME/DATE OF STUDY: 08:54 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.305 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.297  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.260 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.385  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.394 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.778  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.898  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.389 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.409 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.855
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.268 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.727
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.688 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.618  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00  
 UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
 CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
 CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

```

+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV1033CC.DAT ]
Page: 1 of |
+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
+-----+
| 10100.00  119.00| Subarea (UH) Added to Stream #1|      0.0    6558.5|
18.333 |
| 119.00    12603.00| Convex Routing:      Stream #1|    6558.5    6543.8|
18.417 |
| 810.00    809.00| Subarea (UH) Added to Stream #2|      0.0     66.7|
16.250 |
| 809.00    12603.00| Flow-Through Basin: Stream #2|     66.7    23.3|
17.250 | 12.03|
| 12603.00  12603.00| Stream #2 Added to: Stream #1|    6543.8    6559.1|
18.417 |
+-----+
| 12603.00  12603.00| Zero Out:      Stream #2|     23.3     0.0|
|
| 12603.00  126.00| Convex Routing:      Stream #1|    6559.1    6544.1|
18.500 |
| 920.00    905.00| Subarea (UH) Added to Stream #2|      0.0    150.0|
16.333 |
| 905.00    126.00| Flow-Through Basin: Stream #2|    150.0     61.2|
16.500 | 16.83|
| 126.00    126.00| Stream #2 Added to: Stream #1|    6544.1    6572.1|
18.500 |
+-----+
| 126.00    126.00| Zero Out:      Stream #2|     61.2     0.0|
|
| 600.00    126.00| Subarea (UH) Added to Stream #2|      0.0     40.8|
16.417 |
| 126.00    126.00| Stream #2 Added to: Stream #1|    6572.1    6574.7|
18.500 |
| 126.00    126.00| Zero Out:      Stream #2|     40.8     0.0|
|
| 126.00   12720.50| Convex Routing:      Stream #1|    6574.7    6538.7|
18.583 |
+-----+
| 320.00    331.00| Subarea (UH) Added to Stream #2|      0.0    264.5|
16.333 |
| 400.00    331.00| Subarea (UH) Added to Stream #3|      0.0    172.6|
16.333 |
| 390.00    331.00| Subarea (UH) Added to Stream #4|      0.0     21.3|
16.500 |
| 331.00    331.00| Stream #4 Added to: Stream #2|    264.5    283.3|
16.333 |
    
```

	331.00	331.00	Zero Out:	Stream #4	21.3	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	283.3	455.9
16.333						
	331.00	331.00	Zero Out:	Stream #3	172.6	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	455.9	309.9
16.583		67.23				
	331.00	12720.50	Stream #2 Added to:	Stream #1	6538.7	6705.5
18.583						
	12720.50	12720.50	Zero Out:	Stream #2	309.9	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	6705.5	6690.2
18.667						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	106.3
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	6690.2	6699.3
18.667						
	127.00	127.00	Zero Out:	Stream #2	106.3	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	178.3
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	6699.3	6718.9
18.667						
	127.00	127.00	Zero Out:	Stream #2	178.3	0.0
	127.00	129.00	Convex Routing:	Stream #1	6718.9	6700.1
18.833						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	106.5
16.500						
	129.00	129.00	Stream #2 Added to:	Stream #1	6700.1	6709.9
18.833						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	106.5	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	79.5
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	79.5	17.1
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	17.1	14.2
17.417		3.76				
	221.00	222.00	Flow-Through Basin:	Stream #5	62.3	14.0
17.750		8.91				

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV1033CC.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	PEAK (CFS)	PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES				

223.00	222.00	Stream #5 Added to:	Stream #2	14.2	28.1	17.667
222.00	222.00	Zero Out:	Stream #5	14.0	0.0	
222.00	129.00	Stream #2 Added to:	Stream #1	6709.9	6734.7	18.833
129.00	129.00	Zero Out:	Stream #2	28.1	0.0	
129.00	133.00	Convex Routing:	Stream #1	6734.7	6722.8	18.917

13010.00	132.00	Subarea (UH) Added to	Stream #2	0.0	685.5	17.000
132.00	132.00	Flowby Basin Model:	Stream #2	685.5	633.4	17.000
132.00	132.00	Flow-Through Basin:	Stream #3	52.2	0.0	18.000
132.00	4.00					
132.00	132.00	Split Hydrograph:	Stream #3	0.0	0.0	18.000
132.00	132.00	Flow-Through Basin:	Stream #3	0.0	0.0	47.417
	0.00					

132.00	132.00	Stream #3 Added to:	Stream #2	633.4	633.4	17.000
132.00	132.00	Zero Out:	Stream #3	0.0	0.0	
132.00	132.00	Flow-Through Basin:	Stream #4	0.0	0.0	69.333
132.00	0.01					
132.00	132.00	Stream #4 Added to:	Stream #2	633.4	633.4	17.000
132.00	132.00	Zero Out:	Stream #4	0.0	0.0	

132.00	13305.00	Convex Routing:	Stream #2	633.4	609.7	17.417
13305.00	133.00	Convex Routing:	Stream #2	609.7	604.1	17.833
132.00	133.00	Subarea (UH) Added to	Stream #3	0.0	318.2	16.750
133.00	133.00	Stream #3 Added to:	Stream #2	604.1	786.8	17.667

133.00	133.00	Zero Out:	Stream #3	318.2	0.0	17.917
133.00	133.00	Stream #2 Added to:	Stream #1	6722.8	7419.4	17.917
133.00	133.00	Zero Out:	Stream #2	786.8	0.0	
133.00	134.00	Convex Routing:	Stream #1	7419.4	7407.3	18.167
133.00	133.00	View:	Stream #1		7407.3	18.167
	5536.67	3				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV JUNE 2023 ROKAMOTO \*

FILE NAME: EV1033TC.DAT
TIME/DATE OF STUDY: 15:16 06/29/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.727
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<<

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qenter (CFS), Qpass (CFS). Rows include values for 1 and 2.

Table with 3 columns: Node, Value 1, Value 2. Rows 3, 4, 5.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 5.700
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-9.

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1  
-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400
3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900

11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00  
CHANNEL LENGTH (FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.688 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.618
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

Table with columns: TIME (2) TO, NODE #, MODELED (AF), HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), FOOTNOTES. Includes summary header: \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT  
INTERVAL |  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF  
THE DESIGN STORM |

+-----+  
-----+

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV1033UC.DAT
TIME/DATE OF STUDY: 08:55 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.305 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.297
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.260 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.385
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.394 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.778
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.898  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.389 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.409 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.855
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.268 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

   INTERVAL   DEPTH   OUTFLOW   STORAGE
   NUMBER     (FT)   (CFS)     (AF)
1           0.00     0.00     0.000
2           1.00     1.84     0.260
3           2.00     3.22     1.160
4           3.00     4.16     2.520
5           4.00     4.94     3.990
6           5.00     5.60     5.550
7           6.00     7.17     7.200
8           7.00    14.13    8.950
9           8.00    18.54   10.800
10          9.00    21.90   12.740
11         10.00    24.73   14.750
12         11.00    37.17   16.920
13         12.00    57.63   19.160
14         13.00    83.32   21.500
15         14.00   112.96   23.940
16         15.00   133.28   26.480
17         16.00   144.34   29.150
18         17.00   154.45   31.950
19         18.00   163.94   34.870
20         19.00   172.92   37.940
21         20.00   181.39   41.140
22         21.00   189.45   44.500
23         22.00   197.22   48.010
24         23.00   466.70   51.740
25         24.00   951.81   53.820
=====

*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====

*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

*****

```

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV1033UC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	PROCESS
10100.00	119.00	0.0	6898.7	Subarea (UH) Added to Stream #1
18.333				
119.00	12603.00	6898.7	6880.8	Convex Routing: Stream #1
18.417				
810.00	809.00	0.0	71.6	Subarea (UH) Added to Stream #2
16.250				
809.00	12603.00	71.6	24.6	Flow-Through Basin: Stream #2
17.167	12.10			
12603.00	12603.00	6880.8	6896.1	Stream #2 Added to: Stream #1
18.417				
12603.00	12603.00	24.6	0.0	Zero Out: Stream #2
12603.00	126.00	6896.1	6878.0	Convex Routing: Stream #1
18.500				
920.00	905.00	0.0	162.7	Subarea (UH) Added to Stream #2
16.333				
905.00	126.00	162.7	74.8	Flow-Through Basin: Stream #2
16.500	17.04			
126.00	126.00	6878.0	6906.0	Stream #2 Added to: Stream #1
18.500				
126.00	126.00	74.8	0.0	Zero Out: Stream #2
600.00	126.00	0.0	44.8	Subarea (UH) Added to Stream #2
16.417				
126.00	126.00	6906.0	6908.6	Stream #2 Added to: Stream #1
18.500				
126.00	126.00	44.8	0.0	Zero Out: Stream #2
126.00	12720.50	6908.6	6875.7	Convex Routing: Stream #1
18.583				
320.00	331.00	0.0	280.0	Subarea (UH) Added to Stream #2
16.333				
400.00	331.00	0.0	183.6	Subarea (UH) Added to Stream #3
16.333				
390.00	331.00	0.0	23.0	Subarea (UH) Added to Stream #4
16.500				
331.00	331.00	280.0	300.2	Stream #4 Added to: Stream #2
16.333				

331.00	331.00	Zero Out:	Stream #4	23.0	0.0
331.00	331.00	Stream #3 Added to:	Stream #2	300.2	483.9
16.333					
331.00	331.00	Zero Out:	Stream #3	183.6	0.0
331.00	331.00	Flow-Through Basin:	Stream #2	483.9	326.2
16.583	67.86				
331.00	12720.50	Stream #2 Added to:	Stream #1	6875.7	7041.8
18.583					
12720.50	12720.50	Zero Out:	Stream #2	326.2	0.0
12720.50	127.00	Convex Routing:	Stream #1	7041.8	7027.3
18.667					
12710.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	117.1
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	7027.3	7036.3
18.667					
127.00	127.00	Zero Out:	Stream #2	117.1	0.0
50150.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	195.7
16.417					
127.00	127.00	Stream #2 Added to:	Stream #1	7036.3	7055.9
18.667					
127.00	127.00	Zero Out:	Stream #2	195.7	0.0
127.00	129.00	Convex Routing:	Stream #1	7055.9	7033.5
18.833					
50300.00	129.00	Subarea (UH) Added to:	Stream #2	0.0	116.5
16.500					
129.00	129.00	Stream #2 Added to:	Stream #1	7033.5	7043.3
18.833					
129.00	129.00	Zero Out:	Stream #2	116.5	0.0
210.00	221.00	Subarea (UH) Added to:	Stream #2	0.0	84.5
16.333					
221.00	221.00	Flowby Basin Model:	Stream #2	84.5	17.5
16.333					
221.00	223.00	Flow-Through Basin:	Stream #2	17.5	14.2
17.333	3.77				
221.00	222.00	Flow-Through Basin:	Stream #5	67.0	14.5
17.667	9.09				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+
-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV1033UC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00 222.00| Stream #5 Added to: Stream #2| 14.2 28.7|
17.583 | | |
| 222.00 222.00| Zero Out: Stream #5| 14.5 0.0|
| | | |
| 222.00 129.00| Stream #2 Added to: Stream #1| 7043.3 7068.6|
18.833 | | |
| 129.00 129.00| Zero Out: Stream #2| 28.7 0.0|
| | | |
| 129.00 133.00| Convex Routing: Stream #1| 7068.6 7054.6|
18.917 | | |
-----+-----+-----+-----+
| 133.00 133.00| View: Stream #1| 7054.6|
18.917 | 5138.51| 3 |
-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
-----+-----+-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV1034CC.DAT
TIME/DATE OF STUDY: 08:53 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.305 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.297
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.260 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.385
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.394 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.778
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.898  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.389 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.409 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.855
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.268 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.727
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.688 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.618  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.389 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.690  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 1.489 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.760  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV1034CC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	6299.2
18.333				
119.00	12603.00	Convex Routing: Stream #1	6299.2	6285.9
18.417				
810.00	809.00	Subarea (UH) Added to Stream #2	0.0	63.3
16.250				
809.00	12603.00	Flow-Through Basin: Stream #2	63.3	22.3
17.250	11.98			
12603.00	12603.00	Stream #2 Added to: Stream #1	6285.9	6301.2
18.417				
12603.00	12603.00	Zero Out: Stream #2	22.3	0.0
12603.00	126.00	Convex Routing: Stream #1	6301.2	6288.0
18.500				
920.00	905.00	Subarea (UH) Added to Stream #2	0.0	140.9
16.333				
905.00	126.00	Flow-Through Basin: Stream #2	140.9	52.8
16.583	16.70			
126.00	126.00	Stream #2 Added to: Stream #1	6288.0	6316.1
18.500				
126.00	126.00	Zero Out: Stream #2	52.8	0.0
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	37.9
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	6316.1	6318.6
18.500				
126.00	126.00	Zero Out: Stream #2	37.9	0.0
126.00	12720.50	Convex Routing: Stream #1	6318.6	6280.9
18.583				
320.00	331.00	Subarea (UH) Added to Stream #2	0.0	253.9
16.333				
400.00	331.00	Subarea (UH) Added to Stream #3	0.0	165.0
16.333				
390.00	331.00	Subarea (UH) Added to Stream #4	0.0	20.1
16.500				
331.00	331.00	Stream #4 Added to: Stream #2	253.9	271.6
16.333				

331.00	331.00	Zero Out: Stream #4	20.1	0.0
331.00	331.00	Stream #3 Added to: Stream #2	271.6	436.6
16.333				
331.00	331.00	Zero Out: Stream #3	165.0	0.0
331.00	331.00	Flow-Through Basin: Stream #2	436.6	297.5
16.583	66.75			
331.00	12720.50	Stream #2 Added to: Stream #1	6280.9	6448.4
18.583				
12720.50	12720.50	Zero Out: Stream #2	297.5	0.0
12720.50	127.00	Convex Routing: Stream #1	6448.4	6432.7
18.667				
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	98.9
16.500				
127.00	127.00	Stream #2 Added to: Stream #1	6432.7	6441.8
18.667				
127.00	127.00	Zero Out: Stream #2	98.9	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	167.1
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	6441.8	6461.5
18.667				
127.00	127.00	Zero Out: Stream #2	167.1	0.0
127.00	129.00	Convex Routing: Stream #1	6461.5	6445.0
18.833				
50300.00	129.00	Subarea (UH) Added to Stream #2	0.0	99.6
16.500				
129.00	129.00	Stream #2 Added to: Stream #1	6445.0	6454.8
18.833				
129.00	129.00	Zero Out: Stream #2	99.6	0.0
210.00	221.00	Subarea (UH) Added to Stream #2	0.0	75.9
16.333				
221.00	221.00	Flowby Basin Model: Stream #2	75.9	16.9
16.333				
221.00	223.00	Flow-Through Basin: Stream #2	16.9	14.1
17.417	3.75			
221.00	222.00	Flow-Through Basin: Stream #5	59.0	13.5
17.917	8.79			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV1034CC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM  DOWNSTREAM|                                     |UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|    14.1    27.5|
17.833 | | |
| 222.00    222.00| Zero Out:           Stream #5|    13.5    0.0|
| | |
| 222.00    129.00| Stream #2 Added to:  Stream #1|   6454.8   6479.3|
18.833 | | |
| 129.00    129.00| Zero Out:           Stream #2|    27.5    0.0|
| | |
| 129.00    133.00| Convex Routing:     Stream #1|   6479.3   6468.9|
18.917 | | |
-----+-----+-----+-----+
| 13010.00   132.00| Subarea (UH) Added to Stream #2|    0.0    654.8|
17.000 | | |
| 132.00    132.00| Flowby Basin Model: Stream #2|   654.8   608.5|
17.000 | | |
| 132.00    132.00| Flow-Through Basin: Stream #3|    46.3    0.0|
18.000 | 3.38| |
| 132.00    132.00| Split Hydrograph:   Stream #3|    0.0    0.0|
18.000 | | |
| 132.00    132.00| Flow-Through Basin: Stream #3|    0.0    0.0|
47.417 | 0.00| |
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to:  Stream #2|   608.5   608.5|
17.000 | | |
| 132.00    132.00| Zero Out:           Stream #3|    0.0    0.0|
| | |
| 132.00    132.00| Flow-Through Basin: Stream #4|    0.0    0.0|
69.500 | 0.01| |
| 132.00    132.00| Stream #4 Added to:  Stream #2|   608.5   608.5|
17.000 | | |
| 132.00    132.00| Zero Out:           Stream #4|    0.0    0.0|
| | |
-----+-----+-----+-----+
| 132.00   13305.00| Convex Routing:     Stream #2|   608.5   586.3|
17.417 | | |
| 13305.00   133.00| Convex Routing:     Stream #2|   586.3   581.3|
17.833 | | |
| 132.00    133.00| Subarea (UH) Added to Stream #3|    0.0   304.8|
16.750 | | |
| 133.00    133.00| Stream #3 Added to:  Stream #2|   581.3   761.6|
17.667 | | |

```

	133.00	133.00	Zero Out:	Stream #3	304.8	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	6468.9	7165.8
17.917						
	133.00	133.00	Zero Out:	Stream #2	761.6	0.0
	133.00	134.00	Convex Routing:	Stream #1	7165.8	7154.3
18.167						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	343.9
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	7154.3	7261.2
18.167						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	343.9	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	391.0
17.500						
	134.00	134.00	Stream #2 Added to:	Stream #1	7261.2	7587.8
18.083						
	134.00	134.00	Zero Out:	Stream #2	391.0	0.0
	134.00	134.00	View:	Stream #1		7587.8
18.083		5820.83	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV1034UC.DAT
TIME/DATE OF STUDY: 08:53 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.305 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.297  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.260 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.385  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.394 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.778  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.898  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.389 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.409 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.855
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.268 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.727
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.688 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.618  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.690
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

Table with columns: TIME (2) TO, NODE #, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), MODELED (AF), FOOTNOTES. Includes summary header: \* AES FLOODSCx PROGRAM RESULTS SUMMARY \* and various data rows for different stream nodes and processes.

	331.00	331.00	Zero Out:	Stream #4	20.9	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	279.0	449.0
16.333						
	331.00	331.00	Zero Out:	Stream #3	170.0	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	449.0	305.8
16.583		67.07				
	331.00	12720.50	Stream #2 Added to:	Stream #1	6458.1	6625.1
18.583						
	12720.50	12720.50	Zero Out:	Stream #2	305.8	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	6625.1	6610.0
18.667						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	103.6
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	6610.0	6619.1
18.667						
	127.00	127.00	Zero Out:	Stream #2	103.6	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	174.4
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	6619.1	6638.7
18.667						
	127.00	127.00	Zero Out:	Stream #2	174.4	0.0
	127.00	129.00	Convex Routing:	Stream #1	6638.7	6620.6
18.833						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	104.1
16.500						
	129.00	129.00	Stream #2 Added to:	Stream #1	6620.6	6630.4
18.833						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	104.1	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	78.2
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	78.2	17.0
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	17.0	14.1
17.417		3.76				
	221.00	222.00	Flow-Through Basin:	Stream #5	61.2	13.8
17.833		8.87				

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV1034UC.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

223.00	222.00	Stream #5 Added to:	Stream #2	14.1	27.9
17.750					
222.00	222.00	Zero Out:	Stream #5	13.8	0.0
222.00	129.00	Stream #2 Added to:	Stream #1	6630.4	6655.1
18.833					
129.00	129.00	Zero Out:	Stream #2	27.9	0.0
129.00	133.00	Convex Routing:	Stream #1	6655.1	6643.6
18.917					
13010.00	132.00	Subarea (UH) Added to	Stream #2	0.0	674.8
17.000					
132.00	132.00	Flowby Basin Model:	Stream #2	674.8	624.7
17.000					
132.00	132.00	Flow-Through Basin:	Stream #3	50.1	0.0
18.000	3.79				
132.00	132.00	Split Hydrograph:	Stream #3	0.0	0.0
18.000					
132.00	132.00	Flow-Through Basin:	Stream #3	0.0	0.0
47.417	0.00				
132.00	132.00	Stream #3 Added to:	Stream #2	624.7	624.7
17.000					
132.00	132.00	Zero Out:	Stream #3	0.0	0.0
132.00	132.00	Flow-Through Basin:	Stream #4	0.0	0.0
69.583	0.01				
132.00	132.00	Stream #4 Added to:	Stream #2	624.7	624.7
17.000					
132.00	132.00	Zero Out:	Stream #4	0.0	0.0
132.00	13305.00	Convex Routing:	Stream #2	624.7	601.6
17.417					
13305.00	133.00	Convex Routing:	Stream #2	601.6	596.3
17.833					
132.00	133.00	Subarea (UH) Added to	Stream #3	0.0	313.7
16.750					
133.00	133.00	Stream #3 Added to:	Stream #2	596.3	779.0
17.667					

133.00	133.00	Zero Out:	Stream #3	313.7	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	6643.6	7341.2
17.917					
133.00	133.00	Zero Out:	Stream #2	779.0	0.0
133.00	134.00	Convex Routing:	Stream #1	7341.2	7329.1
18.167					
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	356.2
16.417					
134.00	134.00	Stream #2 Added to:	Stream #1	7329.1	7434.7
18.167					
134.00	134.00	Zero Out:	Stream #2	356.2	0.0
134.00	134.00	View:	Stream #1		7434.7
18.167	5643.92	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EVO2126C.DAT
TIME/DATE OF STUDY: 10:06 05/15/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.16; 30-MINUTE = 0.30; 1-HOUR = 0.41
3-HOUR = 0.77; 6-HOUR = 1.15; 24-HOUR = 2.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 312.40; DOWNSTREAM ELEVATION (FT) = 286.00
CHANNEL LENGTH (FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.00	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.429 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

=====

-----+-----

| \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

| INPUT FILENAME: [EV02126C.DAT ]

Page: 1 of |

-----+-----

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
-------------------	---------------------	--------------	------------------------------	---------------------	-----------------------

10100.00	119.00	20.417	Subarea (UH) Added to Stream #1	0.0	519.9
119.00	12603.00	20.500	Convex Routing: Stream #1	519.9	518.1
810.00	809.00	16.250	Subarea (UH) Added to Stream #2	0.0	17.1
809.00	12603.00	22.917	Flow-Through Basin: Stream #2	17.1	1.6
12603.00	12603.00	20.500	Stream #2 Added to: Stream #1	518.1	519.7

12603.00	12603.00	20.583	Zero Out: Stream #2	1.6	0.0
12603.00	126.00	16.333	Convex Routing: Stream #1	519.7	518.5
920.00	905.00	16.333	Subarea (UH) Added to Stream #2	0.0	18.9
905.00	126.00	24.167	Flow-Through Basin: Stream #2	18.9	1.5
126.00	126.00	20.583	Stream #2 Added to: Stream #1	518.5	520.0

126.00	126.00	16.500	Zero Out: Stream #2	1.5	0.0
600.00	126.00	16.500	Subarea (UH) Added to Stream #2	0.0	1.6
126.00	126.00	20.583	Stream #2 Added to: Stream #1	520.0	520.2
126.00	126.00	16.500	Zero Out: Stream #2	1.6	0.0
126.00	126.00	20.583	View: Stream #1		520.2

| Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

-----+-----

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EVO2127C.DAT
TIME/DATE OF STUDY: 10:53 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.17; 30-MINUTE = 0.32; 1-HOUR = 0.44
3-HOUR = 0.82; 6-HOUR = 1.23; 24-HOUR = 2.17
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.00	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.430 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.201; LOW LOSS FRACTION = 0.412  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.315 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.270; LOW LOSS FRACTION = 0.508  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----  
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.578 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.566; LOW LOSS FRACTION = 0.925  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.472 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.586; LOW LOSS FRACTION = 0.976  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.589 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.30; 1-HOUR = 0.40  
3-HOUR = 0.66; 6-HOUR = 0.91; 24-HOUR = 1.54  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 11
=====
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV02127C.DAT ]
Page: 1 of 1
-----+-----
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
-----+-----
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0    574.3|
20.417 | | |
| 119.00     12603.00| Convex Routing:      Stream #1|    574.3    571.0|
20.500 | | |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0     18.2|
16.250 | | |
| 809.00     12603.00| Flow-Through Basin: Stream #2|    18.2     1.7|
23.333 | | 5.59|
| 12603.00   12603.00| Stream #2 Added to: Stream #1|    571.0    572.6|
20.500 | | |
-----+-----
| 12603.00   12603.00| Zero Out:      Stream #2|      1.7     0.0|
| | |
| 12603.00   126.00| Convex Routing:      Stream #1|    572.6    570.4|
20.583 | | |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0     19.8|
16.333 | | |
| 905.00     126.00| Flow-Through Basin: Stream #2|    19.8     1.6|
24.250 | | 7.52|
| 126.00     126.00| Stream #2 Added to: Stream #1|    570.4    571.9|
20.583 | | |
-----+-----
| 126.00     126.00| Zero Out:      Stream #2|      1.6     0.0|
| | |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0     1.7|
16.500 | | |
| 126.00     126.00| Stream #2 Added to: Stream #1|    571.9    572.2|
20.583 | | |
| 126.00     126.00| Zero Out:      Stream #2|      1.7     0.0|
| | |
| 126.00    12720.50| Convex Routing:      Stream #1|    572.2    571.0|
20.750 | | |
-----+-----
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0    104.7|
16.417 | | |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0     57.7|
16.333 | | |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0     1.8|
16.667 | | |
| 331.00     331.00| Stream #4 Added to: Stream #2|    104.7    106.3|
16.417 | | |

```

	331.00	331.00	Zero Out:	Stream #4	1.8	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	106.3	163.9
16.417						
	331.00	331.00	Zero Out:	Stream #3	57.7	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	163.9	82.3
17.500		54.22				
	331.00	12720.50	Stream #2 Added to:	Stream #1	571.0	612.6
20.750						
	12720.50	12720.50	Zero Out:	Stream #2	82.3	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	612.6	611.5
20.833						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	3.7
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	611.5	612.1
20.833						
	127.00	127.00	Zero Out:	Stream #2	3.7	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	8.3
16.667						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	612.1	613.6
20.833						
	127.00	127.00	Zero Out:	Stream #2	8.3	0.0
	127.00	127.00	View:	Stream #1		613.6
20.833		658.97	3			
+-----+						
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL						
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM						
+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV02137C.DAT
TIME/DATE OF STUDY: 10:48 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.17; 30-MINUTE = 0.31; 1-HOUR = 0.43
3-HOUR = 0.80; 6-HOUR = 1.20; 24-HOUR = 2.11
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 312.40; DOWNSTREAM ELEVATION (FT) = 286.00
CHANNEL LENGTH (FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.450
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.430 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.201; LOW LOSS FRACTION = 0.412  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.315 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.270; LOW LOSS FRACTION = 0.508  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.578 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.566; LOW LOSS FRACTION = 0.925  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.472 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.586; LOW LOSS FRACTION = 0.976  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.589 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.564; LOW LOSS FRACTION = 0.940
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.309 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.256; LOW LOSS FRACTION = 0.498
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.15; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
          DATA PAIR          Qcenter          Qpass
          NUMBER              (CFS)              (CFS)
          -                   0.00              0.00
          1                   25.00             13.59
          2                   75.00             16.84
          3                   100.00            18.46
          4                   250.00            28.22
          5                   550.00            47.73
          FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
          INTERVAL          DEPTH          OUTFLOW          STORAGE
          NUMBER            (FT)          (CFS)          (AF)
          1                 0.00          0.00          0.000
          2                 1.00          0.01          0.310
          3                 2.00          0.83          1.240
          4                 3.00          5.60          2.600
          5                 4.00          16.88          4.130
          6                 5.00          23.48          5.790
          7                 6.00          36.73          7.560
          8                 7.00          55.95          9.440
          9                 8.00          78.70          11.430
          10                9.00          228.67         12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.262 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.487; LOW LOSS FRACTION = 0.830
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

```

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8
-----
>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

```

```

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<
=====

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.948 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.449; LOW LOSS FRACTION = 0.752  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.819  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.991 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.567; LOW LOSS FRACTION = 0.908  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

```

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.539 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.474; LOW LOSS FRACTION = 0.780
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV02137C.DAT ]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	0.0	524.4
20.417			
119.00	12603.00	524.4	523.2
20.500			
810.00	809.00	0.0	15.8
16.250			
809.00	12603.00	15.8	1.6
23.333	5.35		
12603.00	12603.00	523.2	524.8
20.500			
12603.00	12603.00	1.6	0.0
12603.00	126.00	524.8	524.0
20.583			
920.00	905.00	0.0	17.5
16.333			
905.00	126.00	17.5	1.5
24.250	7.23		
126.00	126.00	524.0	525.5
20.583			
126.00	126.00	1.5	0.0
600.00	126.00	0.0	1.5
16.500			
126.00	126.00	525.5	525.8
20.583			
126.00	126.00	1.5	0.0
126.00	12720.50	525.8	525.1
20.750			
320.00	331.00	0.0	89.1
16.417			
400.00	331.00	0.0	50.0
16.333			
390.00	331.00	0.0	1.6
16.667			
331.00	331.00	89.1	90.5
16.417			

331.00	331.00	Zero Out:	Stream #4	1.6	0.0
16.417					
331.00	331.00	Zero Out:	Stream #3	50.0	0.0
331.00	331.00	Flow-Through Basin:	Stream #2	140.3	67.8
17.917	53.35				
331.00	12720.50	Stream #2 Added to:	Stream #1	525.1	567.5
20.000					
12720.50	12720.50	Zero Out:	Stream #2	67.8	0.0
12720.50	127.00	Convex Routing:	Stream #1	567.5	567.0
20.083					
12710.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	3.3
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	567.0	567.6
20.083					
127.00	127.00	Zero Out:	Stream #2	3.3	0.0
50150.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	7.4
16.667					
127.00	127.00	Stream #2 Added to:	Stream #1	567.6	569.3
20.083					
127.00	127.00	Zero Out:	Stream #2	7.4	0.0
127.00	129.00	Convex Routing:	Stream #1	569.3	568.6
20.333					
50300.00	129.00	Subarea (UH) Added to:	Stream #2	0.0	6.8
16.667					
129.00	129.00	Stream #2 Added to:	Stream #1	568.6	570.1
20.333					
129.00	129.00	Zero Out:	Stream #2	6.8	0.0
210.00	221.00	Subarea (UH) Added to:	Stream #2	0.0	20.2
15.750					
221.00	221.00	Flowby Basin Model:	Stream #2	20.2	11.0
15.750					
221.00	223.00	Flow-Through Basin:	Stream #2	11.0	5.4
18.167	2.54				
221.00	222.00	Flow-Through Basin:	Stream #5	9.2	3.8
18.333	1.99				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV02137C.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|      5.4      9.2|
18.250 |                |
| 222.00    222.00| Zero Out:           Stream #5|      3.8      0.0|
|                |
| 222.00    129.00| Stream #2 Added to:  Stream #1|     570.1    577.9|
20.333 |                |
| 129.00    129.00| Zero Out:           Stream #2|      9.2      0.0|
|                |
| 129.00    133.00| Convex Routing:     Stream #1|     577.9    577.4|
20.417 |                |
-----+-----+-----+-----+
| 13010.00   132.00| Subarea (UH) Added to Stream #2|      0.0     135.1|
17.333 |                |
| 132.00    132.00| Flowby Basin Model: Stream #2|     135.1    135.1|
17.333 |                |
| 132.00    132.00| Zero Out:           Stream #3|      0.0      0.0|
|                |
| 132.00    132.00| Zero Out:           Stream #4|      0.0      0.0|
|                |
| 132.00    13305.00| Convex Routing:     Stream #2|     135.1    133.7|
17.917 |                |
-----+-----+-----+-----+
| 13305.00   133.00| Convex Routing:     Stream #2|     133.7    133.2|
18.250 |                |
| 132.00    133.00| Subarea (UH) Added to Stream #3|      0.0      71.6|
17.000 |                |
| 133.00    133.00| Stream #3 Added to:  Stream #2|     133.2    194.5|
17.167 |                |
| 133.00    133.00| Zero Out:           Stream #3|      71.6      0.0|
|                |
| 133.00    133.00| Stream #2 Added to:  Stream #1|     577.4    682.0|
18.667 |                |
-----+-----+-----+-----+
| 133.00    133.00| Zero Out:           Stream #2|     194.5      0.0|
|                |
| 133.00    134.00| Convex Routing:     Stream #1|     682.0    681.7|
18.917 |                |
| 133.00    134.00| Subarea (UH) Added to Stream #2|      0.0      60.6|
16.500 |                |
| 134.00    134.00| Stream #2 Added to:  Stream #1|     681.7    699.0|
18.667 |                |

```

	134.00	134.00	Zero Out:	Stream #2	60.6	0.0
+-----+						
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	49.5
18.000						
	134.00	134.00	Stream #2 Added to:	Stream #1	699.0	748.3
18.750						
	134.00	134.00	Zero Out:	Stream #2	49.5	0.0
	134.00	137.00	Convex Routing:	Stream #1	748.3	747.8
18.917						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	50.7
16.583						
+-----+						
	137.00	137.00	Stream #2 Added to:	Stream #1	747.8	765.2
18.667						
	137.00	137.00	Zero Out:	Stream #2	50.7	0.0
	137.00	137.00	View:	Stream #1		765.2
18.667		894.33	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EVO2138C.DAT
TIME/DATE OF STUDY: 10:47 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.17; 30-MINUTE = 0.31; 1-HOUR = 0.42
3-HOUR = 0.79; 6-HOUR = 1.18; 24-HOUR = 2.09
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.48
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.430 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.360 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.201; LOW LOSS FRACTION = 0.412  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.315 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.270; LOW LOSS FRACTION = 0.508  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.578 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.566; LOW LOSS FRACTION = 0.925  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.472 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.586; LOW LOSS FRACTION = 0.976  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.589 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.48  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.564; LOW LOSS FRACTION = 0.940
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.309 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.256; LOW LOSS FRACTION = 0.498
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.262 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.487; LOW LOSS FRACTION = 0.830
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4685.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

\*\*\*\*\*  
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.  
\*\*\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----  
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<  
-----

\*\*\*\*\*  
\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.  
\*\*\*\*\*

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----  
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<  
-----

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00  
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.948 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.449; LOW LOSS FRACTION = 0.752  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.819  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.14; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.50  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.991 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.567; LOW LOSS FRACTION = 0.908  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.44  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

```

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.539 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.474; LOW LOSS FRACTION = 0.780
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.925 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.534; LOW LOSS FRACTION = 0.861
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.88; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 11

```

=====  
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

```
-----+-----+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV02138C.DAT ]
| Page: 1 of |
+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
|TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
| PEAK (HR)  | MODELED (AF)| FOOTNOTES |
+-----+-----+-----+
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0   518.5|
20.417 | |
| 119.00     12603.00| Convex Routing:      Stream #1|    518.5   517.4|
20.500 | |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0    15.3|
16.250 | |
| 810.00     809.00| Flow-Through Basin: Stream #2|    15.3    1.6|
23.000 | 5.28|
| 12603.00   12603.00| Stream #2 Added to: Stream #1|    517.4   519.0|
20.500 | |
+-----+-----+-----+
| 12603.00   12603.00| Zero Out:      Stream #2|      1.6    0.0|
|
| 12603.00   126.00| Convex Routing:      Stream #1|    519.0   518.2|
20.583 | |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0    17.1|
16.333 | |
| 905.00     126.00| Flow-Through Basin: Stream #2|    17.1    1.5|
24.167 | 7.13|
| 126.00     126.00| Stream #2 Added to: Stream #1|    518.2   519.7|
20.583 | |
+-----+-----+-----+
| 126.00     126.00| Zero Out:      Stream #2|      1.5    0.0|
|
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0    1.5|
16.500 | |
| 126.00     126.00| Stream #2 Added to: Stream #1|    519.7   520.0|
20.583 | |
| 126.00     126.00| Zero Out:      Stream #2|      1.5    0.0|
|
| 126.00    12720.50| Convex Routing:      Stream #1|    520.0   519.4|
20.750 | |
+-----+-----+-----+
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0    88.5|
16.417 | |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0    49.6|
16.333 | |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0    1.6|
16.667 | |
| 331.00     331.00| Stream #4 Added to: Stream #2|    88.5    89.9|
16.417 | |
```

	331.00	331.00	Zero Out:	Stream #4	1.6	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	89.9	139.3
16.417						
	331.00	331.00	Zero Out:	Stream #3	49.6	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	139.3	67.5
18.000		53.33				
	331.00	12720.50	Stream #2 Added to:	Stream #1	519.4	561.9
20.000						
	12720.50	12720.50	Zero Out:	Stream #2	67.5	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	561.9	561.4
20.083						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	3.3
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	561.4	562.1
20.083						
	127.00	127.00	Zero Out:	Stream #2	3.3	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	7.3
16.667						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	562.1	563.7
20.083						
	127.00	127.00	Zero Out:	Stream #2	7.3	0.0
	127.00	129.00	Convex Routing:	Stream #1	563.7	563.0
20.333						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	6.8
16.667						
	129.00	129.00	Stream #2 Added to:	Stream #1	563.0	564.5
20.333						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	6.8	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	23.7
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	23.7	12.9
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	12.9	5.4
18.167		2.54				
	221.00	222.00	Flow-Through Basin:	Stream #5	10.8	3.8
18.333		1.99				

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV02138C.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

223.00 18.250	222.00	Stream #5 Added to: Stream #2	5.4	9.2
222.00	222.00	Zero Out: Stream #5	3.8	0.0
222.00 20.333	129.00	Stream #2 Added to: Stream #1	564.5	572.3
129.00	129.00	Zero Out: Stream #2	9.2	0.0
129.00 20.417	133.00	Convex Routing: Stream #1	572.3	571.8

13010.00 17.333	132.00	Subarea (UH) Added to Stream #2	0.0	134.5
132.00 17.333	132.00	Flowby Basin Model: Stream #2	134.5	134.5
132.00	132.00	Zero Out: Stream #3	0.0	0.0
132.00	132.00	Zero Out: Stream #4	0.0	0.0
132.00 17.917	13305.00	Convex Routing: Stream #2	134.5	133.1

13305.00 18.250	133.00	Convex Routing: Stream #2	133.1	132.5
132.00 17.000	133.00	Subarea (UH) Added to Stream #3	0.0	71.2
133.00 17.167	133.00	Stream #3 Added to: Stream #2	132.5	193.6
133.00	133.00	Zero Out: Stream #3	71.2	0.0
133.00 18.667	133.00	Stream #2 Added to: Stream #1	571.8	677.2

133.00	133.00	Zero Out: Stream #2	193.6	0.0
133.00 18.917	134.00	Convex Routing: Stream #1	677.2	676.9
133.00 16.500	134.00	Subarea (UH) Added to Stream #2	0.0	60.2
134.00 18.667	134.00	Stream #2 Added to: Stream #1	676.9	694.1

134.00	134.00	Zero Out: Stream #2	60.2	0.0
--------	--------	---------------------	------	-----

13500.00 18.000	134.00	Subarea (UH) Added to Stream #2	0.0	49.3
134.00 18.750	134.00	Stream #2 Added to: Stream #1	694.1	743.1
134.00	134.00	Zero Out: Stream #2	49.3	0.0
134.00 19.000	137.00	Convex Routing: Stream #1	743.1	742.7
134.00 16.583	137.00	Subarea (UH) Added to Stream #2	0.0	50.0

137.00 18.667	137.00	Stream #2 Added to: Stream #1	742.7	759.7
137.00	137.00	Zero Out: Stream #2	50.0	0.0
137.00 18.917	138.00	Convex Routing: Stream #1	759.7	759.1
137.00 17.000	138.00	Subarea (UH) Added to Stream #2	0.0	30.3
138.00 18.833	138.00	Stream #2 Added to: Stream #1	759.1	774.5

138.00 18.833	138.00	Zero Out: Stream #2	30.3	0.0
138.00 18.833	138.00	View: Stream #1	774.5	

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 2-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EVO2139C.DAT
TIME/DATE OF STUDY: 10:44 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 5.382 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.595; LOW LOSS FRACTION = 0.931
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.16; 30-MINUTE = 0.31; 1-HOUR = 0.42
3-HOUR = 0.79; 6-HOUR = 1.18; 24-HOUR = 2.08
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.220 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.348; LOW LOSS FRACTION = 0.638
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.509; LOW LOSS FRACTION = 0.862
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.430 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.580; LOW LOSS FRACTION = 0.966
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.360 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.201; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.315 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.270; LOW LOSS FRACTION = 0.508
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.578 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.566; LOW LOSS FRACTION = 0.925
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-5 showing increasing depth and storage values.

6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.472 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.586; LOW LOSS FRACTION = 0.976  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.589 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.564; LOW LOSS FRACTION = 0.940
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.309 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.256; LOW LOSS FRACTION = 0.498
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.120
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     37.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.262 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.487; LOW LOSS FRACTION = 0.830
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4316.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

=====

\*\*\*\*\*

\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
 PROCESS IS NEGATED.

\*\*\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
 PROCESS IS NEGATED.

\*\*\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
 ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
 UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00  
 CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040  
 CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
 ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.948 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.449; LOW LOSS FRACTION = 0.752  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.819  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.991 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.567; LOW LOSS FRACTION = 0.908  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

```

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.539 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.474; LOW LOSS FRACTION = 0.780
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.925 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.534; LOW LOSS FRACTION = 0.861
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 5.2

```

=====  
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 119.70; DOWNSTREAM ELEVATION(FT) = 100.00  
CHANNEL LENGTH(FT) = 3107.78 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 1  
=====

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 428.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.413; LOW LOSS FRACTION = 0.670  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.13; 30-MINUTE = 0.29; 1-HOUR = 0.38  
3-HOUR = 0.64; 6-HOUR = 0.87; 24-HOUR = 1.48  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7  
=====

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6  
=====

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 11  
=====

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

-----+-----  
| \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*  
|  
| INPUT FILENAME: [EV02139C.DAT ]  
Page: 1 of |  
+-----+-----+-----+-----+  
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|  
TIME(2) TO | MAX. STORAGE| |  
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS) |  
PEAK (HR) | MODELED (AF) | FOOTNOTES |  
+-----+-----+-----+-----+  
| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 515.7|  
20.417 | | |  
| 119.00 12603.00| Convex Routing: Stream #1| 515.7 514.5|  
20.500 | | |  
| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 15.3|  
16.250 | | |  
| 809.00 12603.00| Flow-Through Basin: Stream #2| 15.3 1.6|  
23.250 | 5.27| |  
| 12603.00 12603.00| Stream #2 Added to: Stream #1| 514.5 516.1|  
20.500 | | |  
+-----+-----+-----+-----+  
| 12603.00 12603.00| Zero Out: Stream #2| 1.6 0.0|  
| 12603.00 126.00| Convex Routing: Stream #1| 516.1 515.4|  
20.583 | | |  
| 920.00 905.00| Subarea (UH) Added to Stream #2| 0.0 17.1|  
16.333 | | |  
| 905.00 126.00| Flow-Through Basin: Stream #2| 17.1 1.5|  
24.250 | 7.12| |  
| 126.00 126.00| Stream #2 Added to: Stream #1| 515.4 516.9|  
20.583 | | |  
+-----+-----+-----+-----+  
| 126.00 126.00| Zero Out: Stream #2| 1.5 0.0|  
| 600.00 126.00| Subarea (UH) Added to Stream #2| 0.0 1.4|  
16.500 | | |  
| 126.00 126.00| Stream #2 Added to: Stream #1| 516.9 517.2|  
20.583 | | |  
| 126.00 126.00| Zero Out: Stream #2| 1.4 0.0|  
| 126.00 12720.50| Convex Routing: Stream #1| 517.2 516.5|  
20.750 | | |  
+-----+-----+-----+-----+  
| 320.00 331.00| Subarea (UH) Added to Stream #2| 0.0 87.0|  
16.417 | | |  
| 400.00 331.00| Subarea (UH) Added to Stream #3| 0.0 48.9|  
16.333 | | |  
| 390.00 331.00| Subarea (UH) Added to Stream #4| 0.0 1.6|  
16.667 | | |  
| 331.00 331.00| Stream #4 Added to: Stream #2| 87.0 88.4|  
16.417 | | |

	331.00	331.00	Zero Out:	Stream #4	1.6	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	88.4	136.7
16.417						
	331.00	331.00	Flow-Through Basin:	Stream #2	136.7	64.1
18.083		53.12				
	331.00	331.00	Zero Out:	Stream #3	48.9	0.0
	331.00	12720.50	Stream #2 Added to:	Stream #1	516.5	558.5
20.000						
	12720.50	12720.50	Zero Out:	Stream #2	64.1	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	558.5	558.0
20.083						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	3.2
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	558.0	558.6
20.083						
	127.00	127.00	Zero Out:	Stream #2	3.2	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	7.3
16.667						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	558.6	560.3
20.083						
	127.00	127.00	Zero Out:	Stream #2	7.3	0.0
	127.00	129.00	Convex Routing:	Stream #1	560.3	559.6
20.333						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	6.7
16.667						
	129.00	129.00	Stream #2 Added to:	Stream #1	559.6	561.1
20.333						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	6.7	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	23.3
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	23.3	12.7
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	12.7	7.7
17.417		2.88				
	221.00	222.00	Flow-Through Basin:	Stream #5	10.6	3.8
18.333		1.96				

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV02139C.DAT ]

Page: 2 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

223.00 17.417	222.00	Stream #5 Added to: Stream #2	7.7	11.4
222.00	222.00	Zero Out: Stream #5	3.8	0.0
222.00 20.333	129.00	Stream #2 Added to: Stream #1	561.1	569.3
129.00	129.00	Zero Out: Stream #2	11.4	0.0
129.00 20.417	133.00	Convex Routing: Stream #1	569.3	568.8
13010.00 17.333	132.00	Subarea (UH) Added to Stream #2	0.0	133.9
132.00 17.333	132.00	Flowby Basin Model: Stream #2	133.9	133.9
132.00	132.00	Zero Out: Stream #3	0.0	0.0
132.00	132.00	Zero Out: Stream #4	0.0	0.0
132.00 17.917	13305.00	Convex Routing: Stream #2	133.9	132.5
13305.00 18.250	133.00	Convex Routing: Stream #2	132.5	132.0
132.00 17.000	133.00	Subarea (UH) Added to Stream #3	0.0	70.8
133.00 17.167	133.00	Stream #3 Added to: Stream #2	132.0	193.1
133.00	133.00	Zero Out: Stream #3	70.8	0.0
133.00 18.667	133.00	Stream #2 Added to: Stream #1	568.8	671.1
133.00	133.00	Zero Out: Stream #2	193.1	0.0
133.00 18.917	134.00	Convex Routing: Stream #1	671.1	670.9
133.00 16.500	134.00	Subarea (UH) Added to Stream #2	0.0	59.5
134.00 18.667	134.00	Stream #2 Added to: Stream #1	670.9	687.7

134.00	134.00	Zero Out: Stream #2	59.5	0.0
13500.00 18.000	134.00	Subarea (UH) Added to Stream #2	0.0	49.0
134.00 18.750	134.00	Stream #2 Added to: Stream #1	687.7	736.6
134.00	134.00	Zero Out: Stream #2	49.0	0.0
134.00 19.000	137.00	Convex Routing: Stream #1	736.6	736.1
134.00 16.583	137.00	Subarea (UH) Added to Stream #2	0.0	49.9
137.00 18.667	137.00	Stream #2 Added to: Stream #1	736.1	753.4
137.00	137.00	Zero Out: Stream #2	49.9	0.0
137.00 18.917	138.00	Convex Routing: Stream #1	753.4	752.9
137.00 17.000	138.00	Subarea (UH) Added to Stream #2	0.0	30.2
138.00 18.833	138.00	Stream #2 Added to: Stream #1	752.9	768.3
138.00	138.00	Zero Out: Stream #2	30.2	0.0
138.00 18.917	139.00	Convex Routing: Stream #1	768.3	768.1
138.00 16.333	139.00	Subarea (UH) Added to Stream #2	0.0	31.7
139.00 18.917	139.00	Stream #2 Added to: Stream #1	768.1	774.9
139.00	139.00	Zero Out: Stream #2	31.7	0.0
139.00 18.917	139.00	View: Stream #1	774.9	

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 25-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV2533CC.DAT
TIME/DATE OF STUDY: 07:37 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.187 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.294 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.268  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.249 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.346  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.373 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.507  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.420 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.655  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.369 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.387 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.628
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.257 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.356
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)     (CFS)     (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.567
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.647 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.409  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV2533CC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	14188.3
18.167				
119.00	12603.00	Convex Routing: Stream #1	14188.3	14112.2
18.083				
810.00	809.00	Subarea (UH) Added to Stream #2	0.0	93.4
16.250				
809.00	12603.00	Flow-Through Basin: Stream #2	93.4	50.5
16.417	13.35			
12603.00	12603.00	Stream #2 Added to: Stream #1	14112.2	14142.2
18.083				
12603.00	12603.00	Zero Out: Stream #2	50.5	0.0
12603.00	126.00	Convex Routing: Stream #1	14142.2	14122.5
18.250				
920.00	905.00	Subarea (UH) Added to Stream #2	0.0	236.9
16.250				
905.00	126.00	Flow-Through Basin: Stream #2	236.9	187.7
16.417	18.82			
126.00	126.00	Stream #2 Added to: Stream #1	14122.5	14189.1
18.167				
126.00	126.00	Zero Out: Stream #2	187.7	0.0
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	67.3
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	14189.1	14201.4
18.167				
126.00	126.00	Zero Out: Stream #2	67.3	0.0
126.00	12720.50	Convex Routing: Stream #1	14201.4	14192.0
18.333				
320.00	331.00	Subarea (UH) Added to Stream #2	0.0	349.7
16.333				
400.00	331.00	Subarea (UH) Added to Stream #3	0.0	231.7
16.333				
390.00	331.00	Subarea (UH) Added to Stream #4	0.0	38.5
16.417				
331.00	331.00	Stream #4 Added to: Stream #2	349.7	384.7
16.333				

331.00	331.00	Zero Out: Stream #4	38.5	0.0
331.00	331.00	Stream #3 Added to: Stream #2	384.7	616.4
16.333				
331.00	331.00	Zero Out: Stream #3	231.7	0.0
331.00	331.00	Flow-Through Basin: Stream #2	616.4	431.3
16.500	71.80			
331.00	12720.50	Stream #2 Added to: Stream #1	14192.0	14435.6
18.333				
12720.50	12720.50	Zero Out: Stream #2	431.3	0.0
12720.50	127.00	Convex Routing: Stream #1	14435.6	14417.1
18.417				
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	195.4
16.500				
127.00	127.00	Stream #2 Added to: Stream #1	14417.1	14465.7
18.417				
127.00	127.00	Zero Out: Stream #2	195.4	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	334.6
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	14465.7	14560.6
17.500				
127.00	127.00	Zero Out: Stream #2	334.6	0.0
127.00	129.00	Convex Routing: Stream #1	14560.6	14555.1
17.583				
50300.00	129.00	Subarea (UH) Added to Stream #2	0.0	184.2
16.417				
129.00	129.00	Stream #2 Added to: Stream #1	14555.1	14626.3
17.583				
129.00	129.00	Zero Out: Stream #2	184.2	0.0
210.00	221.00	Subarea (UH) Added to Stream #2	0.0	106.5
16.333				
221.00	221.00	Flowby Basin Model: Stream #2	106.5	18.9
16.333				
221.00	223.00	Flow-Through Basin: Stream #2	18.9	15.3
17.250	3.91			
221.00	222.00	Flow-Through Basin: Stream #5	87.6	21.6
17.750	12.58			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV2533CC.DAT ]
Page: 2 of |
-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+
| 223.00 222.00| Stream #5 Added to: Stream #2| 15.3 36.8|
17.500 | | |
| 222.00 222.00| Zero Out: Stream #5| 21.6 0.0|
| | | |
| 222.00 129.00| Stream #2 Added to: Stream #1| 14626.3 14663.0|
17.583 | | |
| 129.00 129.00| Zero Out: Stream #2| 36.8 0.0|
| | | |
| 129.00 133.00| Convex Routing: Stream #1| 14663.0 14655.1|
17.667 | | |
-----+
| 13010.00 132.00| Subarea (UH) Added to Stream #2| 0.0 1157.4|
16.917 | | |
| 132.00 132.00| Flowby Basin Model: Stream #2| 1157.4 1014.9|
16.917 | | |
| 132.00 132.00| Flow-Through Basin: Stream #3| 142.5 106.7|
17.333 | 19.90| |
| 132.00 132.00| Split Hydrograph: Stream #3| 106.7 53.4|
17.333 | | |
| 132.00 132.00| Flow-Through Basin: Stream #3| 53.4 12.6|
18.667 | 3.97| |
-----+
| 132.00 132.00| Stream #3 Added to: Stream #2| 1014.9 1015.0|
16.917 | | |
| 132.00 132.00| Zero Out: Stream #3| 12.6 0.0|
| | | |
| 132.00 132.00| Flow-Through Basin: Stream #4| 53.4 10.6|
18.750 | 4.19| |
| 132.00 132.00| Stream #4 Added to: Stream #2| 1015.0 1015.1|
16.917 | | |
| 132.00 132.00| Zero Out: Stream #4| 10.6 0.0|
| | | |
-----+
| 132.00 13305.00| Convex Routing: Stream #2| 1015.1 982.1|
17.417 | | |
| 13305.00 133.00| Convex Routing: Stream #2| 982.1 974.1|
17.667 | | |
| 132.00 133.00| Subarea (UH) Added to Stream #3| 0.0 512.2|
16.667 | | |
| 133.00 133.00| Stream #3 Added to: Stream #2| 974.1 1337.2|
17.583 | | |

```

```

| 133.00 133.00| Zero Out:      Stream #3| 512.2 0.0|
|-----+-----+-----+-----+
| 133.00 133.00| Stream #2 Added to: Stream #1| 14655.1 15989.6|
17.583 |         |         |         |
| 133.00 133.00| Zero Out:      Stream #2| 1337.2 0.0| |
|         |         |         |         |
| 133.00 133.00| View:          Stream #1|         15989.6|
17.583 | 13284.69| 3      |         |
+-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
+-----+-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 25-YR EV NOV 2022 ROKAMOTO \*

FILE NAME: EV2533TC.DAT
TIME/DATE OF STUDY: 10:00 11/01/2022

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.567
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qenter (CFS), Qpass (CFS). Rows include values for 1 and 2.

Table with 3 columns: Node number, Flow value, Storage value. Rows 3, 4, 5.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 5.700
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1 through 9.

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1  
-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400
3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900

11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00  
CHANNEL LENGTH (FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.409
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

Table with columns: TIME (2) TO, NODE #, MODELED (AF), HYDROLOGIC/HYDRAULIC PROCESS, UPSTREAM PEAK (CFS), DOWNSTREAM PEAK (CFS). Rows include entries like 'Subarea (UH) Added to Stream #2', 'Flowby Basin Model', 'Flow-Through Basin', 'Split Hydrograph', 'Convex Routing', etc.

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT  
INTERVAL |  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF  
THE DESIGN STORM |

+-----+  
-----+

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL N \*
\* 25-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV2533UC.DAT
TIME/DATE OF STUDY: 07:38 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.187 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.294 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.268
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.249 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.346
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.373 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.507
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.420 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.655  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.369 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.387 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.628
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.257 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.356
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

   INTERVAL   DEPTH   OUTFLOW   STORAGE
   NUMBER     (FT)   (CFS)     (AF)
   -----
1           0.00     0.00     0.000
2           1.00     1.84     0.260
3           2.00     3.22     1.160
4           3.00     4.16     2.520
5           4.00     4.94     3.990
6           5.00     5.60     5.550
7           6.00     7.17     7.200
8           7.00    14.13    8.950
9           8.00    18.54   10.800
10          9.00    21.90   12.740
11         10.00    24.73   14.750
12         11.00    37.17   16.920
13         12.00    57.63   19.160
14         13.00    83.32   21.500
15         14.00   112.96   23.940
16         15.00   133.28   26.480
17         16.00   144.34   29.150
18         17.00   154.45   31.950
19         18.00   163.94   34.870
20         19.00   172.92   37.940
21         20.00   181.39   41.140
22         21.00   189.45   44.500
23         22.00   197.22   48.010
24         23.00   466.70   51.740
25         24.00   951.81   53.820
-----
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV2533UC.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00 18.167	119.00	Subarea (UH) Added to Stream #1	0.0	14547.9
119.00 18.083	12603.00	Convex Routing: Stream #1	14547.9	14462.9
810.00 16.250	809.00	Subarea (UH) Added to Stream #2	0.0	99.7
809.00 16.417	12603.00 13.46	Flow-Through Basin: Stream #2	99.7	54.0
12603.00 18.083	12603.00	Stream #2 Added to: Stream #1	14462.9	14492.8
12603.00 18.250	12603.00	Zero Out: Stream #2	54.0	0.0
12603.00 16.250	126.00	Convex Routing: Stream #1	14492.8	14471.4
920.00 16.417	905.00	Subarea (UH) Added to Stream #2	0.0	254.2
905.00 18.167	126.00 19.01	Flow-Through Basin: Stream #2	254.2	199.7
126.00	126.00	Stream #2 Added to: Stream #1	14471.4	14537.4
126.00 16.333	126.00	Zero Out: Stream #2	199.7	0.0
600.00 18.167	126.00	Subarea (UH) Added to Stream #2	0.0	72.9
126.00	126.00	Stream #2 Added to: Stream #1	14537.4	14549.4
126.00 16.333	126.00	Zero Out: Stream #2	72.9	0.0
126.00 18.333	12720.50	Convex Routing: Stream #1	14549.4	14539.6
320.00 16.333	331.00	Subarea (UH) Added to Stream #2	0.0	369.6
400.00 16.333	331.00	Subarea (UH) Added to Stream #3	0.0	245.8
390.00 16.417	331.00	Subarea (UH) Added to Stream #4	0.0	40.8
331.00 16.333	331.00	Stream #4 Added to: Stream #2	369.6	406.7

331.00 16.333	331.00	Zero Out: Stream #4	40.8	0.0
331.00 16.333	331.00	Stream #3 Added to: Stream #2	406.7	652.5
331.00 16.500	331.00	Zero Out: Stream #3	245.8	0.0
331.00 16.500	331.00	Flow-Through Basin: Stream #2	652.5	450.8
331.00 18.333	12720.50	Stream #2 Added to: Stream #1	14539.6	14781.7
12720.50	12720.50	Zero Out: Stream #2	450.8	0.0
12720.50 18.417	127.00	Convex Routing: Stream #1	14781.7	14761.0
12710.00 16.500	127.00	Subarea (UH) Added to Stream #2	0.0	209.0
127.00 18.417	127.00	Stream #2 Added to: Stream #1	14761.0	14808.8
127.00	127.00	Zero Out: Stream #2	209.0	0.0
50150.00 16.417	127.00	Subarea (UH) Added to Stream #2	0.0	357.3
127.00 18.417	127.00	Stream #2 Added to: Stream #1	14808.8	14895.9
127.00	127.00	Zero Out: Stream #2	357.3	0.0
127.00 18.500	129.00	Convex Routing: Stream #1	14895.9	14877.2
50300.00 16.417	129.00	Subarea (UH) Added to Stream #2	0.0	197.1
129.00 18.500	129.00	Stream #2 Added to: Stream #1	14877.2	14916.5
129.00 16.333	129.00	Zero Out: Stream #2	197.1	0.0
210.00 16.333	221.00	Subarea (UH) Added to Stream #2	0.0	112.9
221.00 16.333	221.00	Flowby Basin Model: Stream #2	112.9	19.3
221.00 17.250	223.00	Flow-Through Basin: Stream #2	19.3	15.4
221.00 17.667	222.00	Flow-Through Basin: Stream #5	93.6	22.0

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+
-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV2533UC.DAT ]
Page: 2 of |
-----+-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+
| 223.00 222.00| Stream #5 Added to: Stream #2| 15.4 37.3|
17.500 | | |
| 222.00 222.00| Zero Out: Stream #5| 22.0 0.0|
| | | |
| 222.00 129.00| Stream #2 Added to: Stream #1| 14916.5 14953.1|
17.583 | | |
| 129.00 129.00| Zero Out: Stream #2| 37.3 0.0|
| | | |
| 129.00 133.00| Convex Routing: Stream #1| 14953.1 14945.2|
17.667 | | |
-----+-----+
| 133.00 133.00| View: Stream #1| 14945.2|
17.667 | 12444.99| 3 |
-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 25-YR EV JULY 2023 ROKAMOTO \*

FILE NAME: EV2534CC.DAT
TIME/DATE OF STUDY: 15:02 07/05/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.187 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.294 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.268  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.249 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.346  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.373 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.507  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.420 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.655  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.369 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.387 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.628
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.257 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.356
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.567
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.647 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.409  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.367 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.462  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 1.350 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.463  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

```

+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV2534CC.DAT ]
Page: 1 of 1
+-----+
|UPSTREAM DOWNSTREAM| UPSTREAM DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF) | FOOTNOTES |
+-----+
| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 13906.9|
18.167 |
| 119.00 12603.00| Convex Routing: Stream #1| 13906.9 13834.9|
18.083 |
| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 89.0|
16.250 |
| 809.00 12603.00| Flow-Through Basin: Stream #2| 89.0 47.9|
16.417 | 13.28|
| 12603.00 12603.00| Stream #2 Added to: Stream #1| 13834.9 13865.0|
18.083 |
+-----+
| 12603.00 12603.00| Zero Out: Stream #2| 47.9 0.0|
|
| 12603.00 126.00| Convex Routing: Stream #1| 13865.0 13848.1|
18.250 |
| 920.00 905.00| Subarea (UH) Added to Stream #2| 0.0 225.2|
16.250 |
| 905.00 126.00| Flow-Through Basin: Stream #2| 225.2 179.2|
16.417 | 18.68|
| 126.00 126.00| Stream #2 Added to: Stream #1| 13848.1 13914.5|
18.250 |
+-----+
| 126.00 126.00| Zero Out: Stream #2| 179.2 0.0|
|
| 600.00 126.00| Subarea (UH) Added to Stream #2| 0.0 63.4|
16.333 |
| 126.00 126.00| Stream #2 Added to: Stream #1| 13914.5 13926.8|
18.167 |
| 126.00 126.00| Zero Out: Stream #2| 63.4 0.0|
|
| 126.00 12720.50| Convex Routing: Stream #1| 13926.8 13918.7|
18.333 |
+-----+
| 320.00 331.00| Subarea (UH) Added to Stream #2| 0.0 335.9|
16.333 |
| 400.00 331.00| Subarea (UH) Added to Stream #3| 0.0 221.6|
16.333 |
| 390.00 331.00| Subarea (UH) Added to Stream #4| 0.0 36.8|
16.417 |
| 331.00 331.00| Stream #4 Added to: Stream #2| 335.9 369.5|
16.333 |

```

```

| 331.00 331.00| Zero Out: Stream #4| 36.8 0.0|
|
+-----+
| 331.00 331.00| Stream #3 Added to: Stream #2| 369.5 591.1|
16.333 |
| 331.00 331.00| Zero Out: Stream #3| 221.6 0.0|
|
| 331.00 331.00| Flow-Through Basin: Stream #2| 591.1 417.0|
16.500 | 71.26|
| 331.00 12720.50| Stream #2 Added to: Stream #1| 13918.7 14163.6|
18.333 |
| 12720.50 12720.50| Zero Out: Stream #2| 417.0 0.0|
|
+-----+
| 12720.50 127.00| Convex Routing: Stream #1| 14163.6 14146.8|
18.417 |
| 12710.00 127.00| Subarea (UH) Added to Stream #2| 0.0 185.6|
16.500 |
| 127.00 127.00| Stream #2 Added to: Stream #1| 14146.8 14196.0|
18.417 |
| 127.00 127.00| Zero Out: Stream #2| 185.6 0.0|
|
| 50150.00 127.00| Subarea (UH) Added to Stream #2| 0.0 319.5|
16.417 |
+-----+
| 127.00 127.00| Stream #2 Added to: Stream #1| 14196.0 14330.8|
17.333 |
| 127.00 127.00| Zero Out: Stream #2| 319.5 0.0|
|
| 127.00 129.00| Convex Routing: Stream #1| 14330.8 14325.3|
17.583 |
| 50300.00 129.00| Subarea (UH) Added to Stream #2| 0.0 175.1|
16.417 |
| 129.00 129.00| Stream #2 Added to: Stream #1| 14325.3 14397.0|
17.500 |
+-----+
| 129.00 129.00| Zero Out: Stream #2| 175.1 0.0|
|
| 210.00 221.00| Subarea (UH) Added to Stream #2| 0.0 101.9|
16.333 |
| 221.00 221.00| Flowby Basin Model: Stream #2| 101.9 18.6|
16.333 |
| 221.00 223.00| Flow-Through Basin: Stream #2| 18.6 15.2|
17.333 | 3.90|
| 221.00 222.00| Flow-Through Basin: Stream #5| 83.3 21.3|
17.833 | 12.39|
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
+-----+

```

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV2534CC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 15.2    36.4|
17.583 | |
| 222.00    222.00| Zero Out: Stream #5| 21.3    0.0|
| |
| 222.00    129.00| Stream #2 Added to: Stream #1| 14397.0 14433.4|
17.500 | |
| 129.00    129.00| Zero Out: Stream #2| 36.4    0.0|
| |
| 129.00    133.00| Convex Routing: Stream #1| 14433.4 14429.0|
17.583 | |
-----+-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0    1114.8|
16.917 | |
| 132.00    132.00| Flowby Basin Model: Stream #2| 1114.8  980.5|
16.917 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 134.3   99.3|
17.417 | 19.79|
| 132.00    132.00| Split Hydrograph: Stream #3| 99.3    49.7|
17.417 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 49.7    12.3|
18.667 | 3.71|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to: Stream #2| 980.5   980.5|
16.917 | |
| 132.00    132.00| Zero Out: Stream #3| 12.3    0.0|
| |
| 132.00    132.00| Flow-Through Basin: Stream #4| 49.7    10.2|
18.750 | 3.93|
| 132.00    132.00| Stream #4 Added to: Stream #2| 980.5   980.5|
16.917 | |
| 132.00    132.00| Zero Out: Stream #4| 10.2    0.0|
| |
-----+-----+-----+-----+
| 132.00    13305.00| Convex Routing: Stream #2| 980.5   949.7|
17.417 | |
| 13305.00  133.00| Convex Routing: Stream #2| 949.7   942.1|
17.667 | |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0    494.4|
16.667 | |
| 133.00    133.00| Stream #3 Added to: Stream #2| 942.1  1301.3|
17.583 | |

```

	133.00	133.00	Zero Out:	Stream #3	494.4	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	14429.0	15730.2
17.583						
	133.00	133.00	Zero Out:	Stream #2	1301.3	0.0
	133.00	134.00	Convex Routing:	Stream #1	15730.2	15715.9
17.750						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	576.2
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	15715.9	15969.4
17.750						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	576.2	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	887.8
17.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	15969.4	16813.1
17.750						
	134.00	134.00	Zero Out:	Stream #2	887.8	0.0
	134.00	134.00	View:	Stream #1		16813.1
17.750		14093.02	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS  
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)  
(c) Copyright 1989-2010 Advanced Engineering Software (aes)  
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*  
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U \*  
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*  
\* 25-YR EV JULY 2023 ROKAMOTO \*  
\*\*\*\*\*

FILE NAME: EV2534UC.DAT  
TIME/DATE OF STUDY: 15:03 07/05/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.119 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08  
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.187 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	1.520
3	2.00	1.30	3.150
4	3.00	1.60	4.900
5	4.00	1.80	6.790
6	5.00	2.10	8.810
7	6.00	2.30	10.970
8	7.00	47.90	13.270
9	8.00	131.60	15.720
10	9.00	241.70	18.320
11	10.00	372.80	21.060

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.294 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.268  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.249 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.346  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.373 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.507  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.420 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.655  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.369 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.387 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.628
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.257 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.356
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL  DEPTH  OUTFLOW  STORAGE
NUMBER    (FT)   (CFS)    (AF)
-----
1         0.00    0.00     0.000
2         1.00    1.84     0.260
3         2.00    3.22     1.160
4         3.00    4.16     2.520
5         4.00    4.94     3.990
6         5.00    5.60     5.550
7         6.00    7.17     7.200
8         7.00   14.13    8.950
9         8.00   18.54   10.800
10        9.00   21.90   12.740
11       10.00   24.73   14.750
12       11.00   37.17   16.920
13       12.00   57.63   19.160
14       13.00   83.32   21.500
15       14.00  112.96   23.940
16       15.00  133.28   26.480
17       16.00  144.34   29.150
18       17.00  154.45   31.950
19       18.00  163.94   34.870
20       19.00  172.92   37.940
21       20.00  181.39   41.140
22       21.00  189.45   44.500
23       22.00  197.22   48.010
24       23.00  466.70   51.740
25       24.00  951.81   53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.567
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.647 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.409  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.367 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.462
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

Table with columns: TIME (2) TO, NODE #, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), MODELED (AF), FOOTNOTES. Includes summary header: \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

	331.00	331.00	Zero Out:	Stream #4	37.9	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	379.2	607.3
16.333						
	331.00	331.00	Zero Out:	Stream #3	228.1	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	607.3	426.4
16.500		71.62				
	331.00	12720.50	Stream #2 Added to:	Stream #1	14107.7	14351.6
18.333						
	12720.50	12720.50	Zero Out:	Stream #2	426.4	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	14351.6	14333.6
18.417						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	192.0
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	14333.6	14382.4
18.417						
	127.00	127.00	Zero Out:	Stream #2	192.0	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	329.4
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	14382.4	14490.4
17.500						
	127.00	127.00	Zero Out:	Stream #2	329.4	0.0
	127.00	129.00	Convex Routing:	Stream #1	14490.4	14486.2
17.583						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	181.0
16.417						
	129.00	129.00	Stream #2 Added to:	Stream #1	14486.2	14557.5
17.583						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	181.0	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	104.8
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	104.8	18.8
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	18.8	15.2
17.250		3.91				
	221.00	222.00	Flow-Through Basin:	Stream #5	86.1	21.5
17.750		12.52				

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV2534UC.DAT ]

Page: 2 of

UPSTREAM TIME (2)	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #	PEAK (CFS)	PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES	
223.00	222.00	15.2	36.6
17.500			
222.00	222.00	21.5	0.0
222.00	129.00	14557.5	14594.2
17.583			
129.00	129.00	36.6	0.0
129.00	133.00	14594.2	14586.2
17.667			
13010.00	132.00	0.0	1143.1
16.917			
132.00	132.00	1143.1	1003.4
16.917			
132.00	132.00	139.7	104.2
17.333	19.87		
132.00	132.00	104.2	52.1
17.333			
132.00	132.00	52.1	12.5
18.667	3.88		
132.00	132.00	1003.4	1003.5
16.917			
132.00	132.00	12.5	0.0
132.00	132.00	52.1	10.5
18.750	4.11		
132.00	132.00	1003.5	1003.5
16.917			
132.00	132.00	10.5	0.0
132.00	13305.00	1003.5	971.4
17.417			
13305.00	133.00	971.4	963.6
17.667			
132.00	133.00	0.0	506.3
16.667			
133.00	133.00	963.6	1325.7
17.583			

133.00	133.00	Zero Out:	Stream #3	506.3	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	14586.2	15911.2
17.583					
133.00	133.00	Zero Out:	Stream #2	1325.7	0.0
133.00	134.00	Convex Routing:	Stream #1	15911.2	15896.3
17.750					
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	592.8
16.417					
134.00	134.00	Stream #2 Added to:	Stream #1	15896.3	16147.9
17.750					
134.00	134.00	Zero Out:	Stream #2	592.8	0.0
134.00	134.00	View:	Stream #1		16147.9
17.750	13535.36	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV5033CC.DAT
TIME/DATE OF STUDY: 09:00 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.252  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.244 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.326  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.366 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.475  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7  
-----  
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6  
-----  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2  
-----  
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1  
-----  
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<  
=====

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.412 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.623  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7  
-----  
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6  
-----  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1  
-----  
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<  
=====

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.363 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7  
-----  
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6  
-----  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<  
=====

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.255 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.337
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00     24.73     14.750
12         11.00     37.17     16.920
13         12.00     57.63     19.160
14         13.00     83.32     21.500
15         14.00    112.96     23.940
16         15.00    133.28     26.480
17         16.00    144.34     29.150
18         17.00    154.45     31.950
19         18.00    163.94     34.870
20         19.00    172.92     37.940
21         20.00    181.39     41.140
22         21.00    189.45     44.500
23         22.00    197.22     48.010
24         23.00    466.70     51.740
25         24.00    951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.538
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.625 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.383  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.308; 30-MINUTE = 0.363; 1-HOUR = 0.408  
3-HOUR = 0.754; 6-HOUR = 0.891; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

```

-----
|                * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
|INPUT FILENAME: [EV5033CC.DAT ]
Page:  1 of
-----
|UPSTREAM  DOWNSTREAM|          |UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|          |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) | PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
-----
| 10100.00  119.00| Subarea (UH) Added to Stream #1|          0.0  16936.3|
18.083 |                |
|  119.00  12603.00| Convex Routing:       Stream #1| 16936.3  16822.8|
18.083 |                |
|  810.00  809.00| Subarea (UH) Added to Stream #2|          0.0  106.1|
16.250 |                |
|  809.00  12603.00| Flow-Through Basin:  Stream #2| 106.1    62.4|
16.417 | 13.73|
| 12603.00  12603.00| Stream #2 Added to:   Stream #1| 16822.8  16857.6|
18.083 |                |
-----
| 12603.00  12603.00| Zero Out:              Stream #2|          62.4   0.0|
|                |
| 12603.00  126.00| Convex Routing:       Stream #1| 16857.6  16841.5|
18.167 |                |
|  920.00  905.00| Subarea (UH) Added to Stream #2|          0.0  272.9|
16.250 |                |
|  905.00  126.00| Flow-Through Basin:  Stream #2| 272.9   215.5|
16.417 | 19.26|
|  126.00  126.00| Stream #2 Added to:   Stream #1| 16841.5  16924.2|
18.167 |                |
-----
|  126.00  126.00| Zero Out:              Stream #2|          215.5   0.0|
|                |
|  600.00  126.00| Subarea (UH) Added to Stream #2|          0.0   80.3|
16.333 |                |
|  126.00  126.00| Stream #2 Added to:   Stream #1| 16924.2  16939.5|
18.167 |                |
|  126.00  126.00| Zero Out:              Stream #2|          80.3   0.0|
|                |
|  126.00  12720.50| Convex Routing:       Stream #1| 16939.5  16932.4|
18.250 |                |
-----
|  320.00  331.00| Subarea (UH) Added to Stream #2|          0.0   396.6|
16.333 |                |
|  400.00  331.00| Subarea (UH) Added to Stream #3|          0.0   261.3|
16.333 |                |
|  390.00  331.00| Subarea (UH) Added to Stream #4|          0.0    44.9|
16.417 |                |
|  331.00  331.00| Stream #4 Added to:   Stream #2|  396.6   437.8|
16.333 |                |

```

```

|  331.00  331.00| Zero Out:              Stream #4|          44.9   0.0|
|                |
-----
|  331.00  331.00| Stream #3 Added to:   Stream #2|  437.8   699.1|
16.333 |                |
|  331.00  331.00| Zero Out:              Stream #3|  261.3   0.0|
|                |
|  331.00  331.00| Flow-Through Basin:  Stream #2|  699.1   493.3|
16.500 | 74.11|
|  331.00  12720.50| Stream #2 Added to:   Stream #1| 16932.4  17212.4|
18.250 |                |
| 12720.50  12720.50| Zero Out:              Stream #2|          493.3   0.0|
|                |
-----
| 12720.50  127.00| Convex Routing:       Stream #1| 17212.4  17184.6|
18.333 |                |
| 12710.00  127.00| Subarea (UH) Added to Stream #2|          0.0   228.9|
16.500 |                |
|  127.00  127.00| Stream #2 Added to:   Stream #1| 17184.6  17249.6|
18.333 |                |
|  127.00  127.00| Zero Out:              Stream #2|          228.9   0.0|
|                |
| 50150.00  127.00| Subarea (UH) Added to Stream #2|          0.0   394.1|
16.417 |                |
-----
|  127.00  127.00| Stream #2 Added to:   Stream #1| 17249.6  17423.9|
17.417 |                |
|  127.00  127.00| Zero Out:              Stream #2|          394.1   0.0|
|                |
|  127.00  129.00| Convex Routing:       Stream #1| 17423.9  17420.2|
17.500 |                |
| 50300.00  129.00| Subarea (UH) Added to Stream #2|          0.0   218.3|
16.417 |                |
|  129.00  129.00| Stream #2 Added to:   Stream #1| 17420.2  17511.3|
17.500 |                |
-----
|  129.00  129.00| Zero Out:              Stream #2|          218.3   0.0|
|                |
|  210.00  221.00| Subarea (UH) Added to Stream #2|          0.0   120.4|
16.333 |                |
|  221.00  221.00| Flowby Basin Model:  Stream #2|  120.4   19.8|
16.333 |                |
|  221.00  223.00| Flow-Through Basin:  Stream #2|   19.8   15.9|
17.250 | 4.00|
|  221.00  222.00| Flow-Through Basin:  Stream #5|   100.6   27.3|
17.750 | 15.20|
|                |
-----
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
|      3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
-----

```

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV5033CC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     |UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 15.9 43.1|
17.583 |
| 222.00    222.00| Zero Out: Stream #5| 27.3 0.0|
|
| 222.00    129.00| Stream #2 Added to: Stream #1| 17511.3 17554.3|
17.500 |
| 129.00    129.00| Zero Out: Stream #2| 43.1 0.0|
|
| 129.00    133.00| Convex Routing: Stream #1| 17554.3 17546.5|
17.500 |
-----+-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0 1348.6|
16.833 |
| 132.00    132.00| Flowby Basin Model: Stream #2| 1348.6 1169.5|
16.833 |
| 132.00    132.00| Flow-Through Basin: Stream #3| 179.0 168.7|
17.083 | 20.89|
| 132.00    132.00| Split Hydrograph: Stream #3| 168.7 84.3|
17.083 |
| 132.00    132.00| Flow-Through Basin: Stream #3| 84.3 18.3|
18.750 | 9.09|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to: Stream #2| 1169.5 1180.0|
16.833 |
| 132.00    132.00| Zero Out: Stream #3| 18.3 0.0|
|
| 132.00    132.00| Flow-Through Basin: Stream #4| 84.3 18.5|
18.750 | 9.19|
| 132.00    132.00| Stream #4 Added to: Stream #2| 1180.0 1188.1|
16.833 |
| 132.00    132.00| Zero Out: Stream #4| 18.5 0.0|
|
-----+-----+-----+-----+
| 132.00  13305.00| Convex Routing: Stream #2| 1188.1 1173.9|
17.333 |
| 13305.00  133.00| Convex Routing: Stream #2| 1173.9 1161.3|
17.583 |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0 600.8|
16.667 |
| 133.00    133.00| Stream #3 Added to: Stream #2| 1161.3 1597.3|
17.500 |

```

```

| 133.00 133.00| Zero Out:      Stream #3| 600.8 0.0|
|-----+-----+-----+-----+
| 133.00 133.00| Stream #2 Added to: Stream #1| 17546.5 19143.7|
17.500 |         |         |         |
| 133.00 133.00| Zero Out:      Stream #2| 1597.3 0.0| |
|         |         |         |         |
| 133.00 133.00| View:          Stream #1| 19143.7|
17.500 | 15853.61| 3      |         |
+-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
|         3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
+-----+-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV NOV 2022 ROKAMOTO \*

FILE NAME: EV5033TC.DAT
TIME/DATE OF STUDY: 08:57 11/01/2022

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.538
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<<

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qenter (CFS), Qpass (CFS). Rows include values for 1 and 2.

Table with 3 columns: Node number, Value 1, Value 2. Rows 3, 4, 5.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 5.700
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1 through 9.

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400
3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900

11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00  
CHANNEL LENGTH (FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.625 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.383
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.71; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.744; 30-MINUTE = 0.744; 1-HOUR = 0.744
3-HOUR = 0.959; 6-HOUR = 0.978; 24-HOUR = 0.987

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

Table with columns: TIME (2) TO, NODE #, PEAK (CFS), PEAK (CFS). Rows include: 13010.00, 16.833, 132.00, 132.00, Subarea (UH) Added to Stream #2, 0.0, 2969.6; 132.00, 16.833, 132.00, 132.00, Flowby Basin Model: Stream #2, 2969.6, 2152.2; 132.00, 16.917, 132.00, 26.51, Flow-Through Basin: Stream #3, 817.4, 773.1; 132.00, 16.917, 132.00, Split Hydrograph: Stream #3, 773.1, 386.5; 132.00, 18.417, 132.00, 26.17, Flow-Through Basin: Stream #3, 386.5, 27.4; 132.00, 16.833, 132.00, Stream #3 Added to: Stream #2, 2152.2, 2169.5; 132.00, 18.417, 132.00, 26.17, Zero Out: Stream #3, 27.4, 0.0; 132.00, 17.417, 132.00, 26.17, Flow-Through Basin: Stream #4, 386.5, 27.9; 132.00, 16.833, 132.00, Stream #4 Added to: Stream #2, 2169.5, 2186.7; 132.00, 17.167, 13305.00, 13305.00, Convex Routing: Stream #2, 2186.7, 2137.9; 13305.00, 17.417, 133.00, Convex Routing: Stream #2, 2137.9, 2122.2; 132.00, 16.667, 133.00, Subarea (UH) Added to Stream #3, 0.0, 1280.2; 133.00, 17.333, 133.00, Stream #3 Added to: Stream #2, 2122.2, 2690.2; 133.00, 17.333, 133.00, Zero Out: Stream #3, 1280.2, 0.0; 133.00, 17.333, 133.00, Stream #2 Added to: Stream #1, 0.0, 2690.2; 133.00, 17.333, 133.00, Zero Out: Stream #2, 2690.2, 0.0; 133.00, 17.333, 133.00, View: Stream #1, 2690.2; 1219.77, 3.

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT  
INTERVAL |  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF  
THE DESIGN STORM |

+-----+  
-----+

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV5033UC.DAT
TIME/DATE OF STUDY: 09:01 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.252  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.244 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.326  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.366 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.475  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<  
=====

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.412 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.623  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<  
=====

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.363 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422  
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<  
=====

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.255 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.337
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.328; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.897; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

   INTERVAL   DEPTH   OUTFLOW   STORAGE
   NUMBER     (FT)   (CFS)     (AF)
1           0.00     0.00     0.000
2           1.00     1.84     0.260
3           2.00     3.22     1.160
4           3.00     4.16     2.520
5           4.00     4.94     3.990
6           5.00     5.60     5.550
7           6.00     7.17     7.200
8           7.00    14.13    8.950
9           8.00    18.54   10.800
10          9.00    21.90   12.740
11         10.00    24.73   14.750
12         11.00    37.17   16.920
13         12.00    57.63   19.160
14         13.00    83.32   21.500
15         14.00   112.96   23.940
16         15.00   133.28   26.480
17         16.00   144.34   29.150
18         17.00   154.45   31.950
19         18.00   163.94   34.870
20         19.00   172.92   37.940
21         20.00   181.39   41.140
22         21.00   189.45   44.500
23         22.00   197.22   48.010
24         23.00   466.70   51.740
25         24.00   951.81   53.820
=====

*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====

*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE    133.00 TO NODE    133.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

*****

```

```

+-----+
|                    * AES FLOODSCx PROGRAM RESULTS SUMMARY *                    |
|INPUT FILENAME: [EV5033UC.DAT ]|
Page: 1 of 1|
+-----+
|UPSTREAM  DOWNSTREAM|                |UPSTREAM  DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|                |                |
| NODE #    NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF) | FOOTNOTES |
+-----+
| 10100.00  119.00| Subarea (UH) Added to Stream #1|        0.0   17363.1|
18.083 | | | |
| 119.00    12603.00| Convex Routing:      Stream #1| 17363.1   17240.4|
18.083 | | | |
| 810.00    809.00| Subarea (UH) Added to Stream #2|        0.0   113.2|
16.250 | | | |
| 809.00    12603.00| Flow-Through Basin:  Stream #2| 113.2     66.4|
16.417 | 13.85| | | |
| 12603.00  12603.00| Stream #2 Added to:   Stream #1| 17240.4   17275.1|
18.083 | | | |
+-----+
| 12603.00  12603.00| Zero Out:             Stream #2|        66.4     0.0| |
| | | | |
| 12603.00  126.00| Convex Routing:      Stream #1| 17275.1   17256.3|
18.167 | | | |
| 920.00    905.00| Subarea (UH) Added to Stream #2|        0.0   292.1|
16.250 | | | |
| 905.00    126.00| Flow-Through Basin:  Stream #2| 292.1    229.8|
16.417 | 19.46| | | |
| 126.00    126.00| Stream #2 Added to:   Stream #1| 17256.3   17337.4|
18.167 | | | |
+-----+
| 126.00    126.00| Zero Out:             Stream #2|        229.8     0.0| |
| | | | |
| 600.00    126.00| Subarea (UH) Added to Stream #2|        0.0    87.0|
16.333 | | | |
| 126.00    126.00| Stream #2 Added to:   Stream #1| 17337.4   17352.4|
18.167 | | | |
| 126.00    126.00| Zero Out:             Stream #2|        87.0     0.0| |
| | | | |
| 126.00    12720.50| Convex Routing:      Stream #1| 17352.4   17345.6|
18.250 | | | |
+-----+
| 320.00    331.00| Subarea (UH) Added to Stream #2|        0.0   419.3|
16.333 | | | |
| 400.00    331.00| Subarea (UH) Added to Stream #3|        0.0   277.0|
16.333 | | | |
| 390.00    331.00| Subarea (UH) Added to Stream #4|        0.0    47.8|
16.417 | | | |
| 331.00    331.00| Stream #4 Added to:   Stream #2| 419.3    463.1|
16.333 | | | |

```

```

| 331.00    331.00| Zero Out:             Stream #4| 47.8     0.0|
| | | |
+-----+
| 331.00    331.00| Stream #3 Added to:   Stream #2| 463.1    740.1|
16.333 | | | |
| 331.00    331.00| Zero Out:             Stream #3| 277.0     0.0| |
| | | | |
| 331.00    331.00| Flow-Through Basin:  Stream #2| 740.1    515.4|
16.500 | 74.95| | | |
| 331.00    12720.50| Stream #2 Added to:   Stream #1| 17345.6   17623.9|
18.250 | | | |
| 12720.50  12720.50| Zero Out:             Stream #2| 515.4     0.0|
| | | | |
+-----+
| 12720.50  127.00| Convex Routing:      Stream #1| 17623.9   17592.6|
18.333 | | | |
| 12710.00  127.00| Subarea (UH) Added to Stream #2|        0.0   244.4|
16.500 | | | |
| 127.00    127.00| Stream #2 Added to:   Stream #1| 17592.6   17656.4|
18.333 | | | |
| 127.00    127.00| Zero Out:             Stream #2| 244.4     0.0| |
| | | | |
| 50150.00  127.00| Subarea (UH) Added to Stream #2|        0.0   420.4|
16.417 | | | |
+-----+
| 127.00    127.00| Stream #2 Added to:   Stream #1| 17656.4   17779.5|
17.417 | | | |
| 127.00    127.00| Zero Out:             Stream #2| 420.4     0.0| |
| | | | |
| 127.00    129.00| Convex Routing:      Stream #1| 17779.5   17770.1|
17.500 | | | |
| 50300.00  129.00| Subarea (UH) Added to Stream #2|        0.0   233.5|
16.417 | | | |
| 129.00    129.00| Stream #2 Added to:   Stream #1| 17770.1   17861.1|
17.500 | | | |
+-----+
| 129.00    129.00| Zero Out:             Stream #2| 233.5     0.0| |
| | | | |
| 210.00    221.00| Subarea (UH) Added to Stream #2|        0.0   127.8|
16.333 | | | |
| 221.00    221.00| Flowby Basin Model:  Stream #2| 127.8    20.3|
16.333 | | | |
| 221.00    223.00| Flow-Through Basin:  Stream #2| 20.3     16.1|
17.250 | 4.02| | | |
| 221.00    222.00| Flow-Through Basin:  Stream #5| 107.6    28.8|
17.583 | 15.46| | | |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
+-----+

```

```

-----+
-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV5033UC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00 222.00| Stream #5 Added to: Stream #2| 16.1 44.7|
17.500 | | |
| 222.00 222.00| Zero Out: Stream #5| 28.8 0.0|
| | | |
| 222.00 129.00| Stream #2 Added to: Stream #1| 17861.1 17905.8|
17.500 | | |
| 129.00 129.00| Zero Out: Stream #2| 44.7 0.0|
| | | |
| 129.00 133.00| Convex Routing: Stream #1| 17905.8 17897.8|
17.583 | | |
-----+-----+-----+-----+
| 133.00 133.00| View: Stream #1| 17897.8|
17.583 | 14852.18| 3 |
-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
-----+-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV5034CC.DAT
TIME/DATE OF STUDY: 08:00 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.252  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.244 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.326  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.366 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.475  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

```
*****
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

```
*****
```

```
FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.412 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.623
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
```

```
WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.255 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.337
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 1.84 0.260
3 2.00 3.22 1.160
4 3.00 4.16 2.520
5 4.00 4.94 3.990
6 5.00 5.60 5.550
7 6.00 7.17 7.200
8 7.00 14.13 8.950
9 8.00 18.54 10.800
10 9.00 21.90 12.740
11 10.00 24.73 14.750
12 11.00 37.17 16.920
13 12.00 57.63 19.160
14 13.00 83.32 21.500
15 14.00 112.96 23.940
16 15.00 133.28 26.480
17 16.00 144.34 29.150
18 17.00 154.45 31.950
19 18.00 163.94 34.870
20 19.00 172.92 37.940
21 20.00 181.39 41.140
22 21.00 189.45 44.500
23 22.00 197.22 48.010
24 23.00 466.70 51.740
25 24.00 951.81 53.820
=====
*****
FLOW PROCESS FROM NODE 223.00 TO NODE 222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE 222.00 TO NODE 222.00 IS CODE = 6
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 222.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.538
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.625 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.383  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.361 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.433  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 1.294 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.431  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397  
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

```

+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV5034CC.DAT ]
| Page: 1 of |
+-----+
|UPSTREAM DOWNSTREAM| UPSTREAM DOWNSTREAM| |
| TIME(2) TO | MAX. STORAGE|
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
| PEAK (HR) | MODELED (AF)| FOOTNOTES |
+-----+
| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 16602.1|
18.083 | |
| 119.00 12603.00| Convex Routing: Stream #1| 16602.1 16494.2|
18.083 | |
| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 101.1|
16.250 | |
| 809.00 12603.00| Flow-Through Basin: Stream #2| 101.1 59.5|
16.417 | 13.64|
| 12603.00 12603.00| Stream #2 Added to: Stream #1| 16494.2 16529.1|
18.083 | |
+-----+
| 12603.00 12603.00| Zero Out: Stream #2| 59.5 0.0|
|
| 12603.00 126.00| Convex Routing: Stream #1| 16529.1 16515.1|
18.167 | |
| 920.00 905.00| Subarea (UH) Added to Stream #2| 0.0 259.5|
16.250 | |
| 905.00 126.00| Flow-Through Basin: Stream #2| 259.5 206.0|
16.417 | 19.11|
| 126.00 126.00| Stream #2 Added to: Stream #1| 16515.1 16599.2|
18.167 | |
+-----+
| 126.00 126.00| Zero Out: Stream #2| 206.0 0.0|
|
| 600.00 126.00| Subarea (UH) Added to Stream #2| 0.0 76.0|
16.333 | |
| 126.00 126.00| Stream #2 Added to: Stream #1| 16599.2 16614.8|
18.167 | |
| 126.00 126.00| Zero Out: Stream #2| 76.0 0.0|
|
| 126.00 12720.50| Convex Routing: Stream #1| 16614.8 16607.3|
18.250 | |
+-----+
| 320.00 331.00| Subarea (UH) Added to Stream #2| 0.0 381.1|
16.333 | |
| 400.00 331.00| Subarea (UH) Added to Stream #3| 0.0 250.2|
16.333 | |
| 390.00 331.00| Subarea (UH) Added to Stream #4| 0.0 43.0|
16.417 | |
| 331.00 331.00| Stream #4 Added to: Stream #2| 381.1 420.7|
16.333 | |

```

```

| 331.00 331.00| Zero Out: Stream #4| 43.0 0.0|
|
+-----+
| 331.00 331.00| Stream #3 Added to: Stream #2| 420.7 670.9|
16.333 | |
| 331.00 331.00| Zero Out: Stream #3| 250.2 0.0|
|
| 331.00 331.00| Flow-Through Basin: Stream #2| 670.9 477.3|
16.500 | 73.50|
| 331.00 12720.50| Stream #2 Added to: Stream #1| 16607.3 16889.0|
18.250 | |
| 12720.50 12720.50| Zero Out: Stream #2| 477.3 0.0|
|
+-----+
| 12720.50 127.00| Convex Routing: Stream #1| 16889.0 16863.7|
18.333 | |
| 12710.00 127.00| Subarea (UH) Added to Stream #2| 0.0 217.9|
16.500 | |
| 127.00 127.00| Stream #2 Added to: Stream #1| 16863.7 16944.1|
17.417 | |
| 127.00 127.00| Zero Out: Stream #2| 217.9 0.0|
|
| 50150.00 127.00| Subarea (UH) Added to Stream #2| 0.0 375.4|
16.417 | |
+-----+
| 127.00 127.00| Stream #2 Added to: Stream #1| 16944.1 17153.1|
17.250 | |
| 127.00 127.00| Zero Out: Stream #2| 375.4 0.0|
|
| 127.00 129.00| Convex Routing: Stream #1| 17153.1 17142.4|
17.500 | |
| 50300.00 129.00| Subarea (UH) Added to Stream #2| 0.0 207.9|
16.417 | |
| 129.00 129.00| Stream #2 Added to: Stream #1| 17142.4 17239.5|
17.417 | |
+-----+
| 129.00 129.00| Zero Out: Stream #2| 207.9 0.0|
|
| 210.00 221.00| Subarea (UH) Added to Stream #2| 0.0 115.2|
16.333 | |
| 221.00 221.00| Flowby Basin Model: Stream #2| 115.2 19.5|
16.333 | |
| 221.00 223.00| Flow-Through Basin: Stream #2| 19.5 15.8|
17.250 | 3.99|
| 221.00 222.00| Flow-Through Basin: Stream #5| 95.8 26.3|
17.917 | 15.02|
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
+-----+

```

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV5034CC.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     |UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 15.8    41.9|
17.750 |
| 222.00    222.00| Zero Out: Stream #5| 26.3    0.0|
|
| 222.00    129.00| Stream #2 Added to: Stream #1| 17239.5 17280.9|
17.417 |
| 129.00    129.00| Zero Out: Stream #2| 41.9    0.0|
|
| 129.00    133.00| Convex Routing: Stream #1| 17280.9 17275.4|
17.500 |
-----+-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0    1298.3|
16.833 |
| 132.00    132.00| Flowby Basin Model: Stream #2| 1298.3  1128.9|
16.833 |
| 132.00    132.00| Flow-Through Basin: Stream #3| 169.4   159.9|
17.083 | 20.75|
| 132.00    132.00| Split Hydrograph: Stream #3| 159.9   79.9|
17.083 |
| 132.00    132.00| Flow-Through Basin: Stream #3| 79.9    17.9|
18.833 | 8.71|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to: Stream #2| 1128.9  1138.8|
16.833 |
| 132.00    132.00| Zero Out: Stream #3| 17.9    0.0|
|
| 132.00    132.00| Flow-Through Basin: Stream #4| 79.9    18.3|
18.833 | 8.81|
| 132.00    132.00| Stream #4 Added to: Stream #2| 1138.8  1146.6|
16.833 |
| 132.00    132.00| Zero Out: Stream #4| 18.3    0.0|
|
-----+-----+-----+-----+
| 132.00  13305.00| Convex Routing: Stream #2| 1146.6  1133.8|
17.333 |
| 13305.00  133.00| Convex Routing: Stream #2| 1133.8  1121.7|
17.583 |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0    579.5|
16.667 |
| 133.00    133.00| Stream #3 Added to: Stream #2| 1121.7  1551.6|
17.500 |

```

	133.00	133.00	Zero Out:	Stream #3	579.5	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	17275.4	18826.9
17.500						
	133.00	133.00	Zero Out:	Stream #2	1551.6	0.0
	133.00	134.00	Convex Routing:	Stream #1	18826.9	18811.0
17.667						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	669.1
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	18811.0	19121.3
17.667						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	669.1	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	1050.0
17.333						
	134.00	134.00	Stream #2 Added to:	Stream #1	19121.3	20136.2
17.583						
	134.00	134.00	Zero Out:	Stream #2	1050.0	0.0
	134.00	134.00	View:	Stream #1		20136.2
17.583		16809.78	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV5034UC.DAT
TIME/DATE OF STUDY: 08:02 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.252  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.244 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.326  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

=====

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.366 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.475  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

```
*****
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7
```

```
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6
```

```
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2
```

```
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
 UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
 CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
 CONSTANT LOSS RATE(CFS) = 0.00

```
*****
```

```
FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1
```

```
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
```

```
WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.412 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.623
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
```

```
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
```

```
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
```

```
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
```

```
WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
```

```
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
```

```
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.255 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.337
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.538
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.  
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
 DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
 FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.  
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
 DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH (FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.625 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.383  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405  
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.361 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.358; 1-HOUR = 0.405
3-HOUR = 0.750; 6-HOUR = 0.890; 24-HOUR = 0.936

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<

Table with columns: TIME (2) TO, NODE #, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), and FOOTNOTES. It contains multiple rows of data detailing stream processes and peak values.

	331.00	331.00	Zero Out:	Stream #4	44.3	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	431.6	689.0
16.333						
	331.00	331.00	Zero Out:	Stream #3	257.4	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	689.0	487.8
16.500		73.91				
	331.00	12720.50	Stream #2 Added to:	Stream #1	16832.2	17112.7
18.250						
	12720.50	12720.50	Zero Out:	Stream #2	487.8	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	17112.7	17085.4
18.333						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	225.1
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	17085.4	17150.7
18.333						
	127.00	127.00	Zero Out:	Stream #2	225.1	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	387.6
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	17150.7	17339.3
17.417						
	127.00	127.00	Zero Out:	Stream #2	387.6	0.0
	127.00	129.00	Convex Routing:	Stream #1	17339.3	17337.2
17.500						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	214.6
16.417						
	129.00	129.00	Stream #2 Added to:	Stream #1	17337.2	17428.4
17.500						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	214.6	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	118.6
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	118.6	19.7
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	19.7	15.9
17.250		4.00				
	221.00	222.00	Flow-Through Basin:	Stream #5	98.9	27.0
17.750		15.14				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV5034UC.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
223.00 17.667	222.00	Stream #5 Added to:	Stream #2	15.9 42.7
222.00	222.00	Zero Out:	Stream #5	27.0 0.0
222.00 17.500	129.00	Stream #2 Added to:	Stream #1	17428.4 17471.0
129.00	129.00	Zero Out:	Stream #2	42.7 0.0
129.00 17.500	133.00	Convex Routing:	Stream #1	17471.0 17465.6

13010.00 16.833	132.00	Subarea (UH) Added to	Stream #2	0.0 1331.1
132.00 16.833	132.00	Flowby Basin Model:	Stream #2	1331.1 1155.4
132.00 17.083	132.00 20.84	Flow-Through Basin:	Stream #3	175.7 165.7
132.00 17.083	132.00	Split Hydrograph:	Stream #3	165.7 82.8
132.00 18.833	132.00 8.96	Flow-Through Basin:	Stream #3	82.8 18.1

132.00 16.833	132.00	Stream #3 Added to:	Stream #2	1155.4 1165.6
132.00	132.00	Zero Out:	Stream #3	18.1 0.0
132.00 18.750	132.00 9.06	Flow-Through Basin:	Stream #4	82.8 18.5
132.00 16.833	132.00	Stream #4 Added to:	Stream #2	1165.6 1173.6
132.00	132.00	Zero Out:	Stream #4	18.5 0.0

132.00 17.333	13305.00	Convex Routing:	Stream #2	1173.6 1160.3
13305.00 17.583	133.00	Convex Routing:	Stream #2	1160.3 1147.9
132.00 16.667	133.00	Subarea (UH) Added to	Stream #3	0.0 593.4
133.00 17.500	133.00	Stream #3 Added to:	Stream #2	1147.9 1582.1

133.00 17.500	133.00	Zero Out:	Stream #3	593.4 0.0
133.00 17.500	133.00	Stream #2 Added to:	Stream #1	17465.6 19047.8
133.00	133.00	Zero Out:	Stream #2	1582.1 0.0
133.00 17.667	134.00	Convex Routing:	Stream #1	19047.8 19031.6
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0 689.1
134.00 17.667	134.00	Stream #2 Added to:	Stream #1	19031.6 19340.1

134.00 17.667	134.00	Zero Out:	Stream #2	689.1 0.0
134.00 17.667	134.00	View:	Stream #1	19340.1

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV05126C.DAT
TIME/DATE OF STUDY: 13:37 05/16/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.45; 1-HOUR = 0.63
3-HOUR = 1.18; 6-HOUR = 1.75; 24-HOUR = 3.09
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

=====

-----+-----

-----+-----

| \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

| INPUT FILENAME: [EV05126C.DAT ]

Page: 1 of |

-----+-----

|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|

TIME (2) TO | MAX. STORAGE| |

| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS) |

PEAK (HR) | MODELED (AF) | FOOTNOTES |

-----+-----

-----+-----

| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 2435.3|

19.333 | | |

| 119.00 12603.00| Convex Routing: Stream #1| 2435.3 2406.1|

19.417 | | |

| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 35.6|

16.250 | | |

| 809.00 12603.00| Flow-Through Basin: Stream #2| 35.6 2.2|

24.083 | 9.37| |

| 12603.00 12603.00| Stream #2 Added to: Stream #1| 2406.1 2408.2|

19.417 | | |

-----+-----

-----+-----

| 12603.00 12603.00| Zero Out: Stream #2| 2.2 0.0|

| | |

| 12603.00 126.00| Convex Routing: Stream #1| 2408.2 2385.9|

19.500 | | |

| 920.00 905.00| Subarea (UH) Added to Stream #2| 0.0 62.2|

16.333 | | |

| 905.00 126.00| Flow-Through Basin: Stream #2| 62.2 18.0|

17.417 | 10.89| |

| 126.00 126.00| Stream #2 Added to: Stream #1| 2385.9 2399.4|

19.500 | | |

-----+-----

-----+-----

| 126.00 126.00| Zero Out: Stream #2| 18.0 0.0|

| | |

| 600.00 126.00| Subarea (UH) Added to Stream #2| 0.0 13.3|

16.417 | | |

| 126.00 126.00| Stream #2 Added to: Stream #1| 2399.4 2400.1|

19.500 | | |

| 126.00 126.00| Zero Out: Stream #2| 13.3 0.0|

| | |

| 126.00 126.00| View: Stream #1| 2400.1|

19.500 | 1995.21| 3 |

-----+-----

-----+-----

-----+-----

-----+-----

-----+-----

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT

INTERVAL |

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF

THE DESIGN STORM |

-----+-----

-----+-----

-----+-----

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV05127C.DAT
TIME/DATE OF STUDY: 16:15 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.45; 1-HOUR = 0.63
3-HOUR = 1.18; 6-HOUR = 1.75; 24-HOUR = 3.09
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 312.40; DOWNSTREAM ELEVATION (FT) = 286.00
CHANNEL LENGTH (FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.330 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167; LOW LOSS FRACTION = 0.352  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.284 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.447  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----  
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472; LOW LOSS FRACTION = 0.863  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.370 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.489; LOW LOSS FRACTION = 0.949  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.447 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 11
=====
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV05127C.DAT ]
Page: 1 of 1
-----+-----
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
-----+-----
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0    2435.3|
19.333 |
| 119.00     12603.00| Convex Routing:      Stream #1|  2435.3    2406.1|
19.417 |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0     35.6|
16.250 |
| 809.00     12603.00| Flow-Through Basin: Stream #2|      35.6     2.2|
24.083 |          9.37|
| 12603.00   12603.00| Stream #2 Added to: Stream #1|  2406.1    2408.2|
19.417 |
-----+-----
| 12603.00   12603.00| Zero Out:      Stream #2|      2.2     0.0|
|
| 12603.00   126.00| Convex Routing:      Stream #1|  2408.2    2385.9|
19.500 |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0     62.2|
16.333 |
| 905.00     126.00| Flow-Through Basin: Stream #2|      62.2     18.0|
17.417 |          10.89|
| 126.00     126.00| Stream #2 Added to: Stream #1|  2385.9    2399.4|
19.500 |
-----+-----
| 126.00     126.00| Zero Out:      Stream #2|      18.0     0.0|
|
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0     13.3|
16.417 |
| 126.00     126.00| Stream #2 Added to: Stream #1|  2399.4    2400.1|
19.500 |
| 126.00     126.00| Zero Out:      Stream #2|      13.3     0.0|
|
| 126.00     12720.50| Convex Routing:      Stream #1|  2400.1    2398.3|
19.583 |
-----+-----
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0    169.1|
16.417 |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0    102.8|
16.333 |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0     7.6|
16.500 |
| 331.00     331.00| Stream #4 Added to: Stream #2|    169.1    176.0|
16.417 |

```

	331.00	331.00	Zero Out:	Stream #4	7.6	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	176.0	274.4
16.333						
	331.00	331.00	Zero Out:	Stream #3	102.8	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	274.4	189.5
16.667		60.67				
	331.00	12720.50	Stream #2 Added to:	Stream #1	2398.3	2461.9
19.583						
	12720.50	12720.50	Zero Out:	Stream #2	189.5	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	2461.9	2460.4
19.500						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	37.1
16.417						
	127.00	127.00	Stream #2 Added to:	Stream #1	2460.4	2462.7
19.500						
	127.00	127.00	Zero Out:	Stream #2	37.1	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	55.6
16.500						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	2462.7	2468.4
19.500						
	127.00	127.00	Zero Out:	Stream #2	55.6	0.0
	127.00	127.00	View:	Stream #1		2468.4
19.500		2107.63	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV05137C.DAT
TIME/DATE OF STUDY: 09:58 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.45; 1-HOUR = 0.64
3-HOUR = 1.19; 6-HOUR = 1.77; 24-HOUR = 3.13
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.330 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167; LOW LOSS FRACTION = 0.352  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.284 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.447  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472; LOW LOSS FRACTION = 0.863  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1  
-----  
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<  
=====

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.370 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.489; LOW LOSS FRACTION = 0.949  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.447 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.444 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.470; LOW LOSS FRACTION = 0.908
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.286 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.213; LOW LOSS FRACTION = 0.446
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01    CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.986 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.406; LOW LOSS FRACTION = 0.789
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

```

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8
-----
>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

```

```

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<
=====

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.699 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.375; LOW LOSS FRACTION = 0.691  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.390 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.409; LOW LOSS FRACTION = 0.762  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.180 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.473; LOW LOSS FRACTION = 0.843  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

```

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.439 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.395; LOW LOSS FRACTION = 0.714
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 11
-----
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

-----+-----
|          * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV05137C.DAT ]
| Page: 1 of 1
|-----+-----+-----+
|UPSTREAM  DOWNSTREAM|          | UPSTREAM  DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|          |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF) | FOOTNOTES |
|-----+-----+-----+
| 10100.00  119.00| Subarea (UH) Added to Stream #1|      0.0    2242.5|
19.333 |          |
| 119.00    12603.00| Convex Routing:      Stream #1| 2242.5    2222.9|
19.417 |          |
| 810.00    809.00| Subarea (UH) Added to Stream #2|      0.0    31.7|
16.250 |          |
| 809.00    12603.00| Flow-Through Basin: Stream #2|     31.7     2.1|
24.167 |     9.33|
| 12603.00  12603.00| Stream #2 Added to:  Stream #1| 2222.9    2225.0|
19.417 |          |
|-----+-----+-----+
| 12603.00  12603.00| Zero Out:           Stream #2|      2.1     0.0|
|
| 12603.00  126.00| Convex Routing:     Stream #1| 2225.0    2218.8|
19.250 |          |
| 920.00    905.00| Subarea (UH) Added to Stream #2|      0.0    52.9|
16.333 |          |
| 905.00    126.00| Flow-Through Basin: Stream #2|     52.9    17.5|
17.500 |    10.69|
| 126.00    126.00| Stream #2 Added to:  Stream #1| 2218.8    2232.7|
19.250 |          |
|-----+-----+-----+
| 126.00    126.00| Zero Out:           Stream #2|     17.5     0.0|
|
| 600.00    126.00| Subarea (UH) Added to Stream #2|      0.0    10.7|
16.417 |          |
| 126.00    126.00| Stream #2 Added to:  Stream #1| 2232.7    2233.5|
19.250 |          |
| 126.00    126.00| Zero Out:           Stream #2|     10.7     0.0|
|
| 126.00    12720.50| Convex Routing:     Stream #1| 2233.5    2227.0|
19.333 |          |
|-----+-----+-----+
| 320.00    331.00| Subarea (UH) Added to Stream #2|      0.0    155.1|
16.417 |          |
| 400.00    331.00| Subarea (UH) Added to Stream #3|      0.0     93.2|
16.333 |          |
| 390.00    331.00| Subarea (UH) Added to Stream #4|      0.0     6.5|
16.500 |          |
| 331.00    331.00| Stream #4 Added to:  Stream #2|    155.1    161.0|
16.417 |          |

```

```

| 331.00    331.00| Zero Out:           Stream #4|      6.5     0.0|
|-----+-----+-----+
| 331.00    331.00| Stream #3 Added to:  Stream #2|    161.0    249.5|
16.333 |          |
| 331.00    331.00| Zero Out:           Stream #3|      93.2     0.0|
|
| 331.00    331.00| Flow-Through Basin: Stream #2|    249.5    178.8|
16.667 |    60.02|
| 331.00    12720.50| Stream #2 Added to:  Stream #1| 2227.0    2326.7|
18.500 |          |
| 12720.50  12720.50| Zero Out:           Stream #2|    178.8     0.0|
|
|-----+-----+-----+
| 12720.50  127.00| Convex Routing:     Stream #1| 2326.7    2322.9|
18.583 |          |
| 12710.00  127.00| Subarea (UH) Added to Stream #2|      0.0    29.7|
16.417 |          |
| 127.00    127.00| Stream #2 Added to:  Stream #1| 2322.9    2326.2|
18.583 |          |
| 127.00    127.00| Zero Out:           Stream #2|      29.7     0.0|
|
| 50150.00  127.00| Subarea (UH) Added to Stream #2|      0.0    45.5|
16.500 |          |
|-----+-----+-----+
| 127.00    127.00| Stream #2 Added to:  Stream #1| 2326.2    2335.2|
18.583 |          |
| 127.00    127.00| Zero Out:           Stream #2|      45.5     0.0|
|
| 127.00    129.00| Convex Routing:     Stream #1| 2335.2    2326.1|
18.750 |          |
| 50300.00  129.00| Subarea (UH) Added to Stream #2|      0.0    30.2|
16.500 |          |
| 129.00    129.00| Stream #2 Added to:  Stream #1| 2326.1    2331.0|
18.750 |          |
|-----+-----+-----+
| 129.00    129.00| Zero Out:           Stream #2|      30.2     0.0|
|
| 210.00    221.00| Subarea (UH) Added to Stream #2|      0.0    43.5|
16.333 |          |
| 221.00    221.00| Flowby Basin Model: Stream #2|      43.5    14.8|
16.333 |          |
| 221.00    223.00| Flow-Through Basin: Stream #2|      14.8    11.9|
17.417 |     3.45|
| 221.00    222.00| Flow-Through Basin: Stream #5|      28.7     5.1|
18.417 |     4.47|
|-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
|       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
|-----+-----+

```

```

+-----+
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV05137C.DAT ]
Page: 2 of |
+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 11.9    16.9|
17.500 |
| 222.00    222.00| Zero Out: Stream #5| 5.1     0.0|
|
| 222.00    129.00| Stream #2 Added to: Stream #1| 2331.0  2345.8|
18.750 |
| 129.00    129.00| Zero Out: Stream #2| 16.9    0.0|
|
| 129.00    133.00| Convex Routing: Stream #1| 2345.8  2342.2|
18.833 |
+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0     300.6|
17.000 |
| 132.00    132.00| Flowby Basin Model: Stream #2| 300.6   300.6|
17.000 |
| 132.00    132.00| Zero Out: Stream #3| 0.0     0.0|
|
| 132.00    132.00| Zero Out: Stream #4| 0.0     0.0|
|
| 132.00    13305.00| Convex Routing: Stream #2| 300.6   293.3|
17.583 |
+-----+
| 13305.00  133.00| Convex Routing: Stream #2| 293.3   291.9|
17.833 |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0     152.6|
16.750 |
| 133.00    133.00| Stream #3 Added to: Stream #2| 291.9   399.0|
17.667 |
| 133.00    133.00| Zero Out: Stream #3| 152.6   0.0|
|
| 133.00    133.00| Stream #2 Added to: Stream #1| 2342.2  2646.8|
18.417 |
+-----+
| 133.00    133.00| Zero Out: Stream #2| 399.0   0.0|
|
| 133.00    134.00| Convex Routing: Stream #1| 2646.8  2644.3|
18.583 |
| 133.00    134.00| Subarea (UH) Added to Stream #2| 0.0     148.2|
16.417 |
| 134.00    134.00| Stream #2 Added to: Stream #1| 2644.3  2682.2|
18.500 |

```

	134.00	134.00	Zero Out:	Stream #2	148.2	0.0
+-----+						
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	145.3
18.083						
	134.00	134.00	Stream #2 Added to:	Stream #1	2682.2	2823.5
18.583						
	134.00	134.00	Zero Out:	Stream #2	145.3	0.0
	134.00	137.00	Convex Routing:	Stream #1	2823.5	2821.5
18.667						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	118.0
16.500						
+-----+						
	137.00	137.00	Stream #2 Added to:	Stream #1	2821.5	2863.3
18.417						
	137.00	137.00	Zero Out:	Stream #2	118.0	0.0
	137.00	137.00	View:	Stream #1		2863.3
18.417		2611.70	3			
+-----+						
+-----+						
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT						
INTERVAL						
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF						
THE DESIGN STORM						
+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV NOV 2023 ROKAMOTO \*

FILE NAME: EV05138C.DAT
TIME/DATE OF STUDY: 09:57 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.45; 1-HOUR = 0.64
3-HOUR = 1.19; 6-HOUR = 1.77; 24-HOUR = 3.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.330 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167; LOW LOSS FRACTION = 0.352  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.284 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.447  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472; LOW LOSS FRACTION = 0.863  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.370 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.489; LOW LOSS FRACTION = 0.949  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.447 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.444 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.470; LOW LOSS FRACTION = 0.908
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.286 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.213; LOW LOSS FRACTION = 0.446
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.986 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.406; LOW LOSS FRACTION = 0.789
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

```

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8
-----
>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<
=====
***STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO***

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

```

```

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<
=====

*****
****ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).
PROCESS IS NEGATED.
*****

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.699 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.375; LOW LOSS FRACTION = 0.691  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.390 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.409; LOW LOSS FRACTION = 0.762  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.180 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.473; LOW LOSS FRACTION = 0.843  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57  
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

```

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.439 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.395; LOW LOSS FRACTION = 0.714
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.607 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.445; LOW LOSS FRACTION = 0.797
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.19; 30-MINUTE = 0.42; 1-HOUR = 0.57
3-HOUR = 0.95; 6-HOUR = 1.31; 24-HOUR = 2.19
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 11

```

=====  
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

```
-----+-----+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV05138C.DAT ]
| Page: 1 of |
|-----+-----+-----+
| UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
| TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
| PEAK (HR) | MODELED (AF)| FOOTNOTES |
|-----+-----+-----+
| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 2244.4|
19.333 | | |
| 119.00 12603.00| Convex Routing: Stream #1| 2244.4 2224.4|
19.417 | | |
| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 31.2|
16.250 | | |
| 809.00 12603.00| Flow-Through Basin: Stream #2| 31.2 2.1|
24.167 | 9.32| |
| 12603.00 12603.00| Stream #2 Added to: Stream #1| 2224.4 2226.5|
19.417 | | |
|-----+-----+-----+
| 12603.00 12603.00| Zero Out: Stream #2| 2.1 0.0|
| | |
| 12603.00 126.00| Convex Routing: Stream #1| 2226.5 2218.5|
19.250 | | |
| 920.00 905.00| Subarea (UH) Added to Stream #2| 0.0 51.7|
16.333 | | |
| 905.00 126.00| Flow-Through Basin: Stream #2| 51.7 17.4|
17.500 | 10.66| |
| 126.00 126.00| Stream #2 Added to: Stream #1| 2218.5 2232.3|
19.250 | | |
|-----+-----+-----+
| 126.00 126.00| Zero Out: Stream #2| 17.4 0.0|
| | |
| 600.00 126.00| Subarea (UH) Added to Stream #2| 0.0 10.3|
16.417 | | |
| 126.00 126.00| Stream #2 Added to: Stream #1| 2232.3 2233.1|
19.250 | | |
| 126.00 126.00| Zero Out: Stream #2| 10.3 0.0|
| | |
| 126.00 12720.50| Convex Routing: Stream #1| 2233.1 2226.4|
19.333 | | |
|-----+-----+-----+
| 320.00 331.00| Subarea (UH) Added to Stream #2| 0.0 153.7|
16.417 | | |
| 400.00 331.00| Subarea (UH) Added to Stream #3| 0.0 92.2|
16.333 | | |
| 390.00 331.00| Subarea (UH) Added to Stream #4| 0.0 6.3|
16.500 | | |
| 331.00 331.00| Stream #4 Added to: Stream #2| 153.7 159.5|
16.417 | | |
|-----+-----+-----+
```

	331.00	331.00	Zero Out:	Stream #4	6.3	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	159.5	247.2
16.333						
	331.00	331.00	Zero Out:	Stream #3	92.2	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	247.2	177.6
16.667		59.94				
	331.00	12720.50	Stream #2 Added to:	Stream #1	2226.4	2324.9
18.500						
	12720.50	12720.50	Zero Out:	Stream #2	177.6	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	2324.9	2321.1
18.583						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	28.6
16.417						
	127.00	127.00	Stream #2 Added to:	Stream #1	2321.1	2324.4
18.583						
	127.00	127.00	Zero Out:	Stream #2	28.6	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	44.2
16.500						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	2324.4	2333.4
18.583						
	127.00	127.00	Zero Out:	Stream #2	44.2	0.0
	127.00	129.00	Convex Routing:	Stream #1	2333.4	2324.2
18.750						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	29.4
16.500						
	129.00	129.00	Stream #2 Added to:	Stream #1	2324.2	2329.1
18.750						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	29.4	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	43.1
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	43.1	14.8
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	14.8	11.9
17.417		3.45				
	221.00	222.00	Flow-Through Basin:	Stream #5	28.3	5.1
18.417		4.45				

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV05138C.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
223.00	222.00	11.9	16.9
222.00	222.00	5.1	0.0
222.00	129.00	2329.1	2344.0
129.00	129.00	16.9	0.0
129.00	133.00	2344.0	2340.3

17.500	Stream #5 Added to: Stream #2	11.9	16.9
222.00	Zero Out: Stream #5	5.1	0.0
18.750	Stream #2 Added to: Stream #1	2329.1	2344.0
129.00	Zero Out: Stream #2	16.9	0.0
18.833	Convex Routing: Stream #1	2344.0	2340.3

17.000	Subarea (UH) Added to Stream #2	0.0	297.0
17.000	Flowby Basin Model: Stream #2	297.0	297.0
132.00	Zero Out: Stream #3	0.0	0.0
132.00	Zero Out: Stream #4	0.0	0.0
17.583	Convex Routing: Stream #2	297.0	289.9

17.833	Convex Routing: Stream #2	289.9	288.5
16.750	Subarea (UH) Added to Stream #3	0.0	150.9
17.667	Stream #3 Added to: Stream #2	288.5	395.4
133.00	Zero Out: Stream #3	150.9	0.0
18.417	Stream #2 Added to: Stream #1	2340.3	2643.7

133.00	Zero Out: Stream #2	395.4	0.0
18.583	Convex Routing: Stream #1	2643.7	2641.0
16.417	Subarea (UH) Added to Stream #2	0.0	145.7
18.500	Stream #2 Added to: Stream #1	2641.0	2678.8

134.00	134.00	Zero Out:	Stream #2	145.7	0.0
--------	--------	-----------	-----------	-------	-----

18.083	134.00	Subarea (UH) Added to Stream #2	0.0	144.0
18.583	134.00	Stream #2 Added to: Stream #1	2678.8	2819.0
134.00	134.00	Zero Out: Stream #2	144.0	0.0
18.667	134.00	Convex Routing: Stream #1	2819.0	2816.8
16.500	137.00	Subarea (UH) Added to Stream #2	0.0	116.3

18.417	137.00	Stream #2 Added to: Stream #1	2816.8	2857.6
137.00	137.00	Zero Out: Stream #2	116.3	0.0
18.583	137.00	Convex Routing: Stream #1	2857.6	2854.4
16.667	138.00	Subarea (UH) Added to Stream #2	0.0	82.2
18.583	138.00	Stream #2 Added to: Stream #1	2854.4	2886.6

138.00	138.00	Zero Out: Stream #2	82.2	0.0
18.583	138.00	View: Stream #1	2886.6	

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 5-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV05139C.DAT
TIME/DATE OF STUDY: 09:56 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 3.308 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.496; LOW LOSS FRACTION = 0.845
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.24; 30-MINUTE = 0.45; 1-HOUR = 0.64
3-HOUR = 1.18; 6-HOUR = 1.75; 24-HOUR = 3.10
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.203 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.598
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.253 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.424; LOW LOSS FRACTION = 0.818
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.483; LOW LOSS FRACTION = 0.944
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION (FT) = 286.00; DOWNSTREAM ELEVATION (FT) = 258.00  
CHANNEL LENGTH (FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.330 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167; LOW LOSS FRACTION = 0.352  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.284 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.447  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472; LOW LOSS FRACTION = 0.863  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5738.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.370 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.489; LOW LOSS FRACTION = 0.949  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.447 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.444 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.470; LOW LOSS FRACTION = 0.908
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.286 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.213; LOW LOSS FRACTION = 0.446
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01    CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.986 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.406; LOW LOSS FRACTION = 0.789
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*STREAM 3 IS ZERO...STREAM NOW DEFINED AS ZERO\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<<

=====

\*\*\*\*\*

\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.

\*\*\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*

\*\*\*\*ERROR-STREAM 4 CONTAINS NO INFORMATION (EMPTY).  
PROCESS IS NEGATED.

\*\*\*\*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 427.51; DOWNSTREAM ELEVATION(FT) = 315.00  
CHANNEL LENGTH(FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 315.00; DOWNSTREAM ELEVATION(FT) = 212.00  
CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.699 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.375; LOW LOSS FRACTION = 0.691  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
\*\*\*\*\*

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00  
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.390 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.409; LOW LOSS FRACTION = 0.762  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7  
\*\*\*\*\*

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6  
\*\*\*\*\*

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1  
\*\*\*\*\*

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 2.180 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.473; LOW LOSS FRACTION = 0.843  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

```

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.439 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.395; LOW LOSS FRACTION = 0.714
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

```

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.607 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.445; LOW LOSS FRACTION = 0.797
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 5.2

```

=====  
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 0.01 CHANNEL Z = 3.00  
UPSTREAM ELEVATION(FT) = 119.70; DOWNSTREAM ELEVATION(FT) = 100.00  
CHANNEL LENGTH(FT) = 3107.78 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 1  
=====

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 428.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.255 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.345; LOW LOSS FRACTION = 0.606  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.18; 30-MINUTE = 0.42; 1-HOUR = 0.56  
3-HOUR = 0.94; 6-HOUR = 1.30; 24-HOUR = 2.17  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7  
=====

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6  
=====

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 11  
=====

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

-----+-----  
| | | | \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*  
| | | |  
| INPUT FILENAME: [EV05139C.DAT ]  
Page: 1 of |  
+-----+-----+-----+-----+  
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|  
TIME(2) TO | MAX. STORAGE| |  
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|  
PEAK (HR) | MODELED (AF)| FOOTNOTES |  
+-----+-----+-----+-----+  
| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 2205.0|  
19.333 | | |  
| 119.00 12603.00| Convex Routing: Stream #1| 2205.0 2186.5|  
19.417 | | |  
| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 29.5|  
16.250 | | |  
| 809.00 12603.00| Flow-Through Basin: Stream #2| 29.5 2.1|  
24.083 | 9.20| |  
| 12603.00 12603.00| Stream #2 Added to: Stream #1| 2186.5 2188.6|  
19.417 | | |  
+-----+-----+-----+-----+  
12603.00 12603.00	Zero Out: Stream #2	2.1 0.0
12603.00 126.00	Convex Routing: Stream #1	2188.6 2183.4
19.250		
920.00 905.00	Subarea (UH) Added to Stream #2	0.0 46.3
16.333		
905.00 126.00	Flow-Through Basin: Stream #2	46.3 17.1
17.500	10.52	
126.00 126.00	Stream #2 Added to: Stream #1	2183.4 2196.8
19.250		
+-----+-----+-----+-----+		
126.00 126.00	Zero Out: Stream #2	17.1 0.0
600.00 126.00	Subarea (UH) Added to Stream #2	0.0 8.5
16.417		
126.00 126.00	Stream #2 Added to: Stream #1	2196.8 2197.5
19.250		
126.00 126.00	Zero Out: Stream #2	8.5 0.0
126.00 12720.50	Convex Routing: Stream #1	2197.5 2191.2
19.333		
+-----+-----+-----+-----+		
320.00 331.00	Subarea (UH) Added to Stream #2	0.0 148.7
16.417		
400.00 331.00	Subarea (UH) Added to Stream #3	0.0 88.8
16.333		
390.00 331.00	Subarea (UH) Added to Stream #4	0.0 5.6
16.500		
331.00 331.00	Stream #4 Added to: Stream #2	148.7 153.9
16.417 | | |

	331.00	331.00	Zero Out:	Stream #4	5.6	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	153.9	239.9
16.333						
	331.00	331.00	Zero Out:	Stream #3	88.8	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	239.9	173.3
16.583		59.69				
	331.00	12720.50	Stream #2 Added to:	Stream #1	2191.2	2290.8
18.500						
	12720.50	12720.50	Zero Out:	Stream #2	173.3	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	2290.8	2287.2
18.583						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	23.8
16.417						
	127.00	127.00	Stream #2 Added to:	Stream #1	2287.2	2290.4
18.583						
	127.00	127.00	Zero Out:	Stream #2	23.8	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	38.0
16.500						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	2290.4	2299.4
18.583						
	127.00	127.00	Zero Out:	Stream #2	38.0	0.0
	127.00	129.00	Convex Routing:	Stream #1	2299.4	2290.7
18.750						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	25.7
16.500						
	129.00	129.00	Stream #2 Added to:	Stream #1	2290.7	2295.6
18.750						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	25.7	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	41.5
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	41.5	14.7
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	14.7	11.8
17.417		3.44				
	221.00	222.00	Flow-Through Basin:	Stream #5	26.9	5.1
18.417		4.35				
+-----+						

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```
-----+
|
|          * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV05139C.DAT ]
Page: 2 of |
-----+-----+
|UPSTREAM  DOWNSTREAM|          |UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|          |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+-----+
| 223.00  222.00| Stream #5 Added to:  Stream #2|   11.8   16.8|
17.500 |           |              |
| 222.00  222.00| Zero Out:           Stream #5|     5.1   0.0|
|           |              |
| 222.00  129.00| Stream #2 Added to:  Stream #1| 2295.6  2310.3|
18.750 |           |              |
| 129.00  129.00| Zero Out:           Stream #2|   16.8   0.0|
|           |              |
| 129.00  133.00| Convex Routing:     Stream #1| 2310.3  2306.8|
18.833 |           |              |
-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2|    0.0  282.0|
17.000 |           |              |
| 132.00  132.00| Flowby Basin Model:  Stream #2| 282.0  282.0|
17.000 |           |              |
| 132.00  132.00| Zero Out:           Stream #3|    0.0   0.0|
|           |              |
| 132.00  132.00| Zero Out:           Stream #4|    0.0   0.0|
|           |              |
| 132.00  13305.00| Convex Routing:     Stream #2| 282.0  276.4|
17.583 |           |              |
-----+-----+-----+
| 13305.00  133.00| Convex Routing:     Stream #2| 276.4  275.0|
17.833 |           |              |
| 132.00  133.00| Subarea (UH) Added to Stream #3|    0.0  144.0|
16.750 |           |              |
| 133.00  133.00| Stream #3 Added to:  Stream #2| 275.0  380.8|
17.667 |           |              |
| 133.00  133.00| Zero Out:           Stream #3|   144.0  0.0|
|           |              |
| 133.00  133.00| Stream #2 Added to:  Stream #1| 2306.8  2604.9|
18.417 |           |              |
-----+-----+-----+
| 133.00  133.00| Zero Out:           Stream #2| 380.8   0.0|
|           |              |
| 133.00  134.00| Convex Routing:     Stream #1| 2604.9  2602.1|
18.583 |           |              |
| 133.00  134.00| Subarea (UH) Added to Stream #2|    0.0  135.7|
16.417 |           |              |
| 134.00  134.00| Stream #2 Added to:  Stream #1| 2602.1  2639.1|
18.583 |           |              |
-----+-----+-----+

```

```

| 134.00  134.00| Zero Out:           Stream #2| 135.7   0.0|
|           |              |
-----+-----+-----+
| 13500.00  134.00| Subarea (UH) Added to Stream #2|    0.0  138.1|
18.083 |           |              |
| 134.00  134.00| Stream #2 Added to:  Stream #1| 2639.1  2773.9|
18.583 |           |              |
| 134.00  134.00| Zero Out:           Stream #2| 138.1   0.0|
|           |              |
| 134.00  137.00| Convex Routing:     Stream #1| 2773.9  2771.5|
18.667 |           |              |
| 134.00  137.00| Subarea (UH) Added to Stream #2|    0.0  109.1|
16.500 |           |              |
-----+-----+-----+
| 137.00  137.00| Stream #2 Added to:  Stream #1| 2771.5  2809.6|
18.417 |           |              |
| 137.00  137.00| Zero Out:           Stream #2| 109.1   0.0|
|           |              |
| 137.00  138.00| Convex Routing:     Stream #1| 2809.6  2806.6|
18.583 |           |              |
| 137.00  138.00| Subarea (UH) Added to Stream #2|    0.0  76.4|
16.667 |           |              |
| 138.00  138.00| Stream #2 Added to:  Stream #1| 2806.6  2838.7|
18.583 |           |              |
-----+-----+-----+
| 138.00  138.00| Zero Out:           Stream #2| 76.4   0.0|
|           |              |
| 138.00  139.00| Convex Routing:     Stream #1| 2838.7  2837.9|
18.667 |           |              |
| 138.00  139.00| Subarea (UH) Added to Stream #2|    0.0  60.3|
16.333 |           |              |
| 139.00  139.00| Stream #2 Added to:  Stream #1| 2837.9  2850.2|
18.667 |           |              |
| 139.00  139.00| Zero Out:           Stream #2| 60.3   0.0|
|           |              |
-----+-----+-----+
| 139.00  139.00| View:               Stream #1| 2850.2|
18.667 | 2650.39| 3 |
-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
|       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
|
-----+-----+-----+

```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV10126C.DAT
TIME/DATE OF STUDY: 07:59 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

```
-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV10126C.DAT ]
Page: 1 of |
-----+-----+-----+-----+-----+
| UPSTREAM DOWNSTREAM|                               | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                               |                               |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+-----+
| 10100.00   119.00| Subarea (UH) Added to Stream #1|    0.0    7128.1|
18.333 | | |
| 119.00     12603.00| Convex Routing:      Stream #1|  7128.1  7107.7|
18.417 | | |
| 810.00     809.00| Subarea (UH) Added to Stream #2|    0.0    74.9|
16.250 | | |
| 809.00     12603.00| Flow-Through Basin: Stream #2|    74.9    25.6|
17.167 | | 12.15|
| 12603.00   12603.00| Stream #2 Added to: Stream #1|  7107.7  7123.0|
18.417 | | |
-----+-----+-----+-----+-----+
| 12603.00   12603.00| Zero Out:          Stream #2|    25.6    0.0|
| | |
| 12603.00   126.00| Convex Routing:      Stream #1|  7123.0  7103.5|
18.500 | | |
| 920.00     905.00| Subarea (UH) Added to Stream #2|    0.0    171.2|
16.333 | | |
| 905.00     126.00| Flow-Through Basin: Stream #2|   171.2    86.0|
16.500 | | 17.24|
| 126.00     126.00| Stream #2 Added to: Stream #1|  7103.5  7131.5|
18.500 | | |
-----+-----+-----+-----+-----+
| 126.00     126.00| Zero Out:          Stream #2|    86.0    0.0|
| | |
| 600.00     126.00| Subarea (UH) Added to Stream #2|    0.0    47.4|
16.417 | | |
| 126.00     126.00| Stream #2 Added to: Stream #1|  7131.5  7134.0|
18.500 | | |
| 126.00     126.00| Zero Out:          Stream #2|    47.4    0.0|
| | |
| 126.00     126.00| View:              Stream #1|           7134.0|
18.500 | | 4918.33| 3 |
-----+-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
|       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
-----+-----+-----+-----+-----+
```

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV10127C.DAT
TIME/DATE OF STUDY: 08:55 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.305 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.297  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.260 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.385  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.394 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.778  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.898  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.389 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 11
=====
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV10127C.DAT ]
Page: 1 of 1
-----+-----
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
-----+-----
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0    6945.3|
18.333 |                                     |
| 119.00     12603.00| Convex Routing:      Stream #1|  6945.3    6926.5|
18.417 |                                     |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0     72.3|
16.250 |                                     |
| 809.00     12603.00| Flow-Through Basin: Stream #2|      72.3     24.9|
17.167 | 12.11|                                     |
| 12603.00   12603.00| Stream #2 Added to: Stream #1|  6926.5    6941.8|
18.417 |                                     |
-----+-----
| 12603.00   12603.00| Zero Out:      Stream #2|      24.9     0.0|
|                                     |
| 12603.00   126.00| Convex Routing:      Stream #1|  6941.8    6923.7|
18.500 |                                     |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0    164.4|
16.333 |                                     |
| 905.00     126.00| Flow-Through Basin: Stream #2|     164.4     77.0|
16.500 | 17.08|                                     |
| 126.00     126.00| Stream #2 Added to: Stream #1|  6923.7    6951.8|
18.500 |                                     |
-----+-----
| 126.00     126.00| Zero Out:      Stream #2|      77.0     0.0|
|                                     |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0     45.3|
16.417 |                                     |
| 126.00     126.00| Stream #2 Added to: Stream #1|  6951.8    6954.3|
18.500 |                                     |
| 126.00     126.00| Zero Out:      Stream #2|      45.3     0.0|
|                                     |
| 126.00    12720.50| Convex Routing:      Stream #1|  6954.3    6921.5|
18.583 |                                     |
-----+-----
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0    282.0|
16.333 |                                     |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0    185.1|
16.333 |                                     |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0     23.3|
16.500 |                                     |
| 331.00     331.00| Stream #4 Added to: Stream #2|     282.0    302.5|
16.333 |                                     |

```

	331.00	331.00	Zero Out:	Stream #4	23.3	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	302.5	487.6
16.333						
	331.00	331.00	Zero Out:	Stream #3	185.1	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	487.6	328.4
16.583		67.95				
	331.00	12720.50	Stream #2 Added to:	Stream #1	6921.5	7087.5
18.583						
	12720.50	12720.50	Zero Out:	Stream #2	328.4	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	7087.5	7073.0
18.667						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	118.5
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	7073.0	7082.0
18.667						
	127.00	127.00	Zero Out:	Stream #2	118.5	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	198.0
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	7082.0	7101.6
18.667						
	127.00	127.00	Zero Out:	Stream #2	198.0	0.0
	127.00	127.00	View:	Stream #1		7101.6
18.667		5096.56	3			
+-----+						
-----+						
	Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL					
	3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM					
+-----+						
-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV10137C.DAT
TIME/DATE OF STUDY: 08:51 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.305 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.297  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.260 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.385  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.394 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.778  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.898  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.389 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.409 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.855
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.268 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.727
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.688 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.618  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.690
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.489 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.760
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.445 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.636
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 11  
=====

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

```
-----+-----+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV10137C.DAT ]
Page: 1 of 1
-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0    6244.8|
18.333 |                                     |
| 119.00     12603.00| Convex Routing:      Stream #1| 6244.8    6231.8|
18.417 |                                     |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0     62.6|
16.250 |                                     |
| 809.00     12603.00| Flow-Through Basin: Stream #2| 62.6     22.0|
17.250 |                                     |
| 12603.00   12603.00| Stream #2 Added to: Stream #1| 6231.8   6247.0|
18.417 |                                     |
-----+-----+-----+
| 12603.00   12603.00| Zero Out:           Stream #2| 22.0     0.0|
|                                     |
| 12603.00   126.00| Convex Routing:     Stream #1| 6247.0   6234.4|
18.500 |                                     |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0    139.2|
16.333 |                                     |
| 905.00     126.00| Flow-Through Basin: Stream #2| 139.2    51.1|
16.583 |                                     |
| 126.00     126.00| Stream #2 Added to: Stream #1| 6234.4   6262.4|
18.500 |                                     |
-----+-----+-----+
| 126.00     126.00| Zero Out:           Stream #2| 51.1     0.0|
|                                     |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0    37.4|
16.417 |                                     |
| 126.00     126.00| Stream #2 Added to: Stream #1| 6262.4   6265.0|
18.500 |                                     |
| 126.00     126.00| Zero Out:           Stream #2| 37.4     0.0|
|                                     |
| 126.00     12720.50| Convex Routing:     Stream #1| 6265.0   6227.2|
18.583 |                                     |
-----+-----+-----+
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0    252.1|
16.333 |                                     |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0    163.6|
16.333 |                                     |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0    19.8|
16.500 |                                     |
| 331.00     331.00| Stream #4 Added to: Stream #2| 252.1    269.5|
16.333 |                                     |
-----+-----+-----+
```

	331.00	331.00	Zero Out:	Stream #4	19.8	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	269.5	433.2
16.333						
	331.00	331.00	Zero Out:	Stream #3	163.6	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	433.2	294.9
16.583		66.65				
	331.00	12720.50	Stream #2 Added to:	Stream #1	6227.2	6394.8
18.583						
	12720.50	12720.50	Zero Out:	Stream #2	294.9	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	6394.8	6379.1
18.667						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	97.6
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	6379.1	6388.3
18.667						
	127.00	127.00	Zero Out:	Stream #2	97.6	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	165.0
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	6388.3	6408.0
18.667						
	127.00	127.00	Zero Out:	Stream #2	165.0	0.0
	127.00	129.00	Convex Routing:	Stream #1	6408.0	6391.7
18.833						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	98.4
16.500						
	129.00	129.00	Stream #2 Added to:	Stream #1	6391.7	6401.5
18.833						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	98.4	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	75.3
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	75.3	16.9
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	16.9	14.1
17.417		3.75				
	221.00	222.00	Flow-Through Basin:	Stream #5	58.4	13.4
18.000		8.77				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV10137C.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #	HYDROLOGIC/HYDRAULIC PROCESS	PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES	

223.00	222.00	Stream #5 Added to: Stream #2	14.1	27.4
17.917				
222.00	222.00	Zero Out: Stream #5	13.4	0.0
222.00	129.00	Stream #2 Added to: Stream #1	6401.5	6426.0
18.833				
129.00	129.00	Zero Out: Stream #2	27.4	0.0
129.00	133.00	Convex Routing: Stream #1	6426.0	6415.7
18.917				

13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	649.0
17.000				
132.00	132.00	Flowby Basin Model: Stream #2	649.0	603.8
17.000				
132.00	132.00	Flow-Through Basin: Stream #3	45.2	0.0
18.000	3.26			
132.00	132.00	Split Hydrograph: Stream #3	0.0	0.0
18.000				
132.00	132.00	Flow-Through Basin: Stream #3	0.0	0.0
47.333	0.00			

132.00	132.00	Stream #3 Added to: Stream #2	603.8	603.8
17.000				
132.00	132.00	Zero Out: Stream #3	0.0	0.0
132.00	132.00	Flow-Through Basin: Stream #4	0.0	0.0
69.500	0.01			
132.00	132.00	Stream #4 Added to: Stream #2	603.8	603.8
17.000				
132.00	132.00	Zero Out: Stream #4	0.0	0.0

132.00	13305.00	Convex Routing: Stream #2	603.8	581.9
17.417				
13305.00	133.00	Convex Routing: Stream #2	581.9	577.2
17.833				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	302.2
16.750				
133.00	133.00	Stream #3 Added to: Stream #2	577.2	757.3
17.667				

133.00	133.00	Zero Out: Stream #3	302.2	0.0
133.00	133.00	Stream #2 Added to: Stream #1	6415.7	7111.2
17.917				
133.00	133.00	Zero Out: Stream #2	757.3	0.0
133.00	134.00	Convex Routing: Stream #1	7111.2	7099.5
18.167				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	340.4
16.417				
134.00	134.00	Stream #2 Added to: Stream #1	7099.5	7206.8
18.167				
134.00	134.00	Zero Out: Stream #2	340.4	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	387.9
17.500				
134.00	134.00	Stream #2 Added to: Stream #1	7206.8	7532.1
18.083				
134.00	134.00	Zero Out: Stream #2	387.9	0.0
134.00	137.00	Convex Routing: Stream #1	7532.1	7520.7
18.333				
134.00	137.00	Subarea (UH) Added to Stream #2	0.0	250.8
16.500				
137.00	137.00	Stream #2 Added to: Stream #1	7520.7	7608.2
18.250				
137.00	137.00	Zero Out: Stream #2	250.8	0.0
138.00	138.00	View: Stream #1		7608.2
18.250	5913.07	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV10138C.DAT
TIME/DATE OF STUDY: 08:51 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.305 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.297  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.260 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.385  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.394 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.778  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.898  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.389 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.409 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.855
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.268 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

  INTERVAL   DEPTH   OUTFLOW   STORAGE
  NUMBER     (FT)    (CFS)     (AF)
  1           0.00     0.00     0.000
  2           1.00     1.84     0.260
  3           2.00     3.22     1.160
  4           3.00     4.16     2.520
  5           4.00     4.94     3.990
  6           5.00     5.60     5.550
  7           6.00     7.17     7.200
  8           7.00    14.13    8.950
  9           8.00    18.54   10.800
 10          9.00    21.90   12.740
 11         10.00    24.73   14.750
 12         11.00    37.17   16.920
 13         12.00    57.63   19.160
 14         13.00    83.32   21.500
 15         14.00   112.96   23.940
 16         15.00   133.28   26.480
 17         16.00   144.34   29.150
 18         17.00   154.45   31.950
 19         18.00   163.94   34.870
 20         19.00   172.92   37.940
 21         20.00   181.39   41.140
 22         21.00   189.45   44.500
 23         22.00   197.22   48.010
 24         23.00   466.70   51.740
 25         24.00   951.81   53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00   CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52   MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.727
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3

THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700

SPECIFIED DEAD STORAGE (AF) FILLED = 5.700

SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000

DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3

THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000

SPECIFIED DEAD STORAGE (AF) FILLED = 0.000

SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000

DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4

THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000

SPECIFIED DEAD STORAGE (AF) FILLED = 0.000

SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000

DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.688 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.618  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.690
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.489 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.760
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.445 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.636
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70  
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.562 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.267; LOW LOSS FRACTION = 0.717  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

```

+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV10138C.DAT ]
Page: 1 of
+-----+
|UPSTREAM DOWNSTREAM| UPSTREAM DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
+-----+
| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 6188.6|
18.333 |
| 119.00 12603.00| Convex Routing: Stream #1| 6188.6 6175.2|
18.417 |
| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 61.9|
16.250 |
| 809.00 12603.00| Flow-Through Basin: Stream #2| 61.9 21.8|
17.250 | 11.95|
| 12603.00 12603.00| Stream #2 Added to: Stream #1| 6175.2 6190.5|
18.417 |
+-----+
| 12603.00 12603.00| Zero Out: Stream #2| 21.8 0.0|
|
| 12603.00 126.00| Convex Routing: Stream #1| 6190.5 6178.0|
18.500 |
| 920.00 905.00| Subarea (UH) Added to Stream #2| 0.0 137.4|
16.333 |
| 905.00 126.00| Flow-Through Basin: Stream #2| 137.4 49.3|
16.583 | 16.63|
| 126.00 126.00| Stream #2 Added to: Stream #1| 6178.0 6206.1|
18.500 |
+-----+
| 126.00 126.00| Zero Out: Stream #2| 49.3 0.0|
|
| 600.00 126.00| Subarea (UH) Added to Stream #2| 0.0 36.8|
16.417 |
| 126.00 126.00| Stream #2 Added to: Stream #1| 6206.1 6208.7|
18.500 |
| 126.00 126.00| Zero Out: Stream #2| 36.8 0.0|
|
| 126.00 12720.50| Convex Routing: Stream #1| 6208.7 6170.6|
18.583 |
+-----+
| 320.00 331.00| Subarea (UH) Added to Stream #2| 0.0 250.1|
16.333 |
| 400.00 331.00| Subarea (UH) Added to Stream #3| 0.0 162.1|
16.333 |
| 390.00 331.00| Subarea (UH) Added to Stream #4| 0.0 19.6|
16.500 |
| 331.00 331.00| Stream #4 Added to: Stream #2| 250.1 267.3|
16.333 |

```

```

| 331.00 331.00| Zero Out: Stream #4| 19.6 0.0|
|
+-----+
| 331.00 331.00| Stream #3 Added to: Stream #2| 267.3 429.4|
16.333 |
| 331.00 331.00| Zero Out: Stream #3| 162.1 0.0|
|
| 331.00 331.00| Flow-Through Basin: Stream #2| 429.4 292.3|
16.583 | 66.55|
| 331.00 12720.50| Stream #2 Added to: Stream #1| 6170.6 6338.4|
18.583 |
| 12720.50 12720.50| Zero Out: Stream #2| 292.3 0.0|
|
+-----+
| 12720.50 127.00| Convex Routing: Stream #1| 6338.4 6322.5|
18.667 |
| 12710.00 127.00| Subarea (UH) Added to Stream #2| 0.0 96.1|
16.500 |
| 127.00 127.00| Stream #2 Added to: Stream #1| 6322.5 6331.6|
18.667 |
| 127.00 127.00| Zero Out: Stream #2| 96.1 0.0|
|
| 50150.00 127.00| Subarea (UH) Added to Stream #2| 0.0 162.7|
16.417 |
+-----+
| 127.00 127.00| Stream #2 Added to: Stream #1| 6331.6 6351.4|
18.667 |
| 127.00 127.00| Zero Out: Stream #2| 162.7 0.0|
|
| 127.00 129.00| Convex Routing: Stream #1| 6351.4 6335.6|
18.833 |
| 50300.00 129.00| Subarea (UH) Added to Stream #2| 0.0 97.0|
16.500 |
| 129.00 129.00| Stream #2 Added to: Stream #1| 6335.6 6345.3|
18.833 |
+-----+
| 129.00 129.00| Zero Out: Stream #2| 97.0 0.0|
|
| 210.00 221.00| Subarea (UH) Added to Stream #2| 0.0 74.6|
16.333 |
| 221.00 221.00| Flowby Basin Model: Stream #2| 74.6 16.8|
16.333 |
| 221.00 223.00| Flow-Through Basin: Stream #2| 16.8 14.1|
17.417 | 3.75|
| 221.00 222.00| Flow-Through Basin: Stream #5| 57.8 13.3|
18.000 | 8.75|
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
+-----+

```

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV10138C.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 14.1    27.3|
17.917 |
| 222.00    222.00| Zero Out: Stream #5| 13.3    0.0|
|
| 222.00    129.00| Stream #2 Added to: Stream #1| 6345.3  6369.7|
18.833 |
| 129.00    129.00| Zero Out: Stream #2| 27.3    0.0|
|
| 129.00    133.00| Convex Routing: Stream #1| 6369.7  6359.8|
18.917 |
-----+-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0    642.8|
17.000 |
| 132.00    132.00| Flowby Basin Model: Stream #2| 642.8   598.9|
17.000 |
| 132.00    132.00| Flow-Through Basin: Stream #3| 44.0    0.0|
18.000 | 3.14|
| 132.00    132.00| Split Hydrograph: Stream #3| 0.0    0.0|
18.000 |
| 132.00    132.00| Flow-Through Basin: Stream #3| 0.0    0.0|
47.417 | 0.00|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to: Stream #2| 598.9   598.9|
17.000 |
| 132.00    132.00| Zero Out: Stream #3| 0.0    0.0|
|
| 132.00    132.00| Flow-Through Basin: Stream #4| 0.0    0.0|
69.583 | 0.01|
| 132.00    132.00| Stream #4 Added to: Stream #2| 598.9   598.9|
17.000 |
| 132.00    132.00| Zero Out: Stream #4| 0.0    0.0|
|
-----+-----+-----+-----+
| 132.00    13305.00| Convex Routing: Stream #2| 598.9   577.2|
17.417 |
| 13305.00  133.00| Convex Routing: Stream #2| 577.2   572.5|
17.833 |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0    299.4|
16.750 |
| 133.00    133.00| Stream #3 Added to: Stream #2| 572.5   751.8|
17.667 |

```

	133.00	133.00	Zero Out:	Stream #3	299.4	0.0
+-----+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	6359.8	7053.8
17.917						
	133.00	133.00	Zero Out:	Stream #2	751.8	0.0
	133.00	134.00	Convex Routing:	Stream #1	7053.8	7042.5
18.167						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	336.6
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	7042.5	7150.2
18.167						
+-----+-----+						
	134.00	134.00	Zero Out:	Stream #2	336.6	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	384.7
17.500						
	134.00	134.00	Stream #2 Added to:	Stream #1	7150.2	7473.2
18.083						
	134.00	134.00	Zero Out:	Stream #2	384.7	0.0
	134.00	137.00	Convex Routing:	Stream #1	7473.2	7462.3
18.333						
+-----+-----+						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	248.2
16.500						
	137.00	137.00	Stream #2 Added to:	Stream #1	7462.3	7549.5
18.250						
	137.00	137.00	Zero Out:	Stream #2	248.2	0.0
	137.00	138.00	Convex Routing:	Stream #1	7549.5	7539.1
18.417						
	137.00	138.00	Subarea (UH) Added to	Stream #2	0.0	201.5
16.583						
+-----+-----+						
	138.00	138.00	Stream #2 Added to:	Stream #1	7539.1	7608.0
18.417						
	138.00	138.00	Zero Out:	Stream #2	201.5	0.0
	138.00	138.00	View:	Stream #1	7608.0	
18.417		5985.69	3			
+-----+-----+						
+-----+-----+						
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT						
INTERVAL						
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF						
THE DESIGN STORM						
+-----+-----+						
+-----+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 10-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV10139C.DAT
TIME/DATE OF STUDY: 07:50 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.191 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.548
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing depth and storage values.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.231 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.750
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.318 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.905
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.305 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.297  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.260 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.385  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.394 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.778  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.448 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.898  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.464 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.855  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.409 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.855
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.268 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL  DEPTH  OUTFLOW  STORAGE
NUMBER    (FT)   (CFS)    (AF)
-----
1         0.00    0.00     0.000
2         1.00    1.84     0.260
3         2.00    3.22     1.160
4         3.00    4.16     2.520
5         4.00    4.94     3.990
6         5.00    5.60     5.550
7         6.00    7.17     7.200
8         7.00   14.13    8.950
9         8.00   18.54   10.800
10        9.00   21.90   12.740
11       10.00   24.73   14.750
12       11.00   37.17   16.920
13       12.00   57.63   19.160
14       13.00   83.32   21.500
15       14.00  112.96   23.940
16       15.00  133.28   26.480
17       16.00  144.34   29.150
18       17.00  154.45   31.950
19       18.00  163.94   34.870
20       19.00  172.92   37.940
21       20.00  181.39   41.140
22       21.00  189.45   44.500
23       22.00  197.22   48.010
24       23.00  466.70   51.740
25       24.00  951.81   53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.727
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.688 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.618  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.690
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.489 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.760
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.429 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.636
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70  
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.561 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.267; LOW LOSS FRACTION = 0.717  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 119.70; DOWNSTREAM ELEVATION(FT) = 100.00  
CHANNEL LENGTH(FT) = 3107.78 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 428.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.258 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.207; LOW LOSS FRACTION = 0.540  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78  
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV10139C.DAT ]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	PROCESS
10100.00	119.00	0.0	6171.0	Subarea (UH) Added to Stream #1
18.333				
119.00	12603.00	6171.0	6158.0	Convex Routing: Stream #1
18.417				
810.00	809.00	0.0	61.7	Subarea (UH) Added to Stream #2
16.250				
809.00	12603.00	61.7	21.7	Flow-Through Basin: Stream #2
17.250	11.95			
12603.00	12603.00	6158.0	6173.2	Stream #2 Added to: Stream #1
18.417				
12603.00	12603.00	21.7	0.0	Zero Out: Stream #2
12603.00	126.00	6173.2	6160.9	Convex Routing: Stream #1
18.500				
920.00	905.00	0.0	136.7	Subarea (UH) Added to Stream #2
16.333				
905.00	126.00	136.7	48.8	Flow-Through Basin: Stream #2
16.583	16.62			
126.00	126.00	6160.9	6189.0	Stream #2 Added to: Stream #1
18.500				
126.00	126.00	48.8	0.0	Zero Out: Stream #2
600.00	126.00	0.0	36.6	Subarea (UH) Added to Stream #2
16.417				
126.00	126.00	6189.0	6191.6	Stream #2 Added to: Stream #1
18.500				
126.00	126.00	36.6	0.0	Zero Out: Stream #2
126.00	12720.50	6191.6	6153.8	Convex Routing: Stream #1
18.583				
320.00	331.00	0.0	249.3	Subarea (UH) Added to Stream #2
16.333				
400.00	331.00	0.0	161.6	Subarea (UH) Added to Stream #3
16.333				
390.00	331.00	0.0	19.5	Subarea (UH) Added to Stream #4
16.500				
331.00	331.00	249.3	266.5	Stream #4 Added to: Stream #2
16.333				

331.00	331.00	Zero Out:	Stream #4	19.5	0.0
331.00	331.00	Stream #3 Added to:	Stream #2	266.5	428.1
16.333					
331.00	331.00	Zero Out:	Stream #3	161.6	0.0
331.00	331.00	Flow-Through Basin:	Stream #2	428.1	291.5
16.583	66.52				
331.00	12720.50	Stream #2 Added to:	Stream #1	6153.8	6321.6
18.583					
12720.50	12720.50	Zero Out:	Stream #2	291.5	0.0
12720.50	127.00	Convex Routing:	Stream #1	6321.6	6305.6
18.667					
12710.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	95.6
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	6305.6	6314.8
18.667					
127.00	127.00	Zero Out:	Stream #2	95.6	0.0
50150.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	144.6
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	6314.8	6334.7
18.667					
127.00	127.00	Zero Out:	Stream #2	144.6	0.0
127.00	129.00	Convex Routing:	Stream #1	6334.7	6318.8
18.833					
50300.00	129.00	Subarea (UH) Added to:	Stream #2	0.0	96.5
16.500					
129.00	129.00	Stream #2 Added to:	Stream #1	6318.8	6328.6
18.833					
129.00	129.00	Zero Out:	Stream #2	96.5	0.0
210.00	221.00	Subarea (UH) Added to:	Stream #2	0.0	74.4
16.333					
221.00	221.00	Flowby Basin Model:	Stream #2	74.4	16.8
16.333					
221.00	223.00	Flow-Through Basin:	Stream #2	16.8	14.1
17.417	3.75				
221.00	222.00	Flow-Through Basin:	Stream #5	57.6	13.3
18.000	8.74				
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM					

```

-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV10139C.DAT ]
Page: 2 of |
-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS) |
PEAK (HR) | MODELED (AF) | FOOTNOTES |
-----+
| 223.00 222.00| Stream #5 Added to: Stream #2| 14.1 27.3|
17.917 | | |
| 222.00 222.00| Zero Out: Stream #5| 13.3 0.0|
| | | |
| 222.00 129.00| Stream #2 Added to: Stream #1| 6328.6 6353.0|
18.833 | | |
| 129.00 129.00| Zero Out: Stream #2| 27.3 0.0|
| | | |
| 129.00 133.00| Convex Routing: Stream #1| 6353.0 6343.0|
18.917 | | |
-----+
| 13010.00 132.00| Subarea (UH) Added to Stream #2| 0.0 640.8|
17.000 | | |
| 132.00 132.00| Flowby Basin Model: Stream #2| 640.8 597.2|
17.000 | | |
| 132.00 132.00| Flow-Through Basin: Stream #3| 43.6 0.0|
17.917 | 3.10| |
| 132.00 132.00| Split Hydrograph: Stream #3| 0.0 0.0|
17.917 | | |
| 132.00 132.00| Flow-Through Basin: Stream #3| 0.0 0.0|
47.500 | 0.00| |
-----+
| 132.00 132.00| Stream #3 Added to: Stream #2| 597.2 597.2|
17.000 | | |
| 132.00 132.00| Zero Out: Stream #3| 0.0 0.0|
| | | |
| 132.00 132.00| Flow-Through Basin: Stream #4| 0.0 0.0|
69.667 | 0.01| |
| 132.00 132.00| Stream #4 Added to: Stream #2| 597.2 597.2|
17.000 | | |
| 132.00 132.00| Zero Out: Stream #4| 0.0 0.0|
| | | |
-----+
| 132.00 13305.00| Convex Routing: Stream #2| 597.2 575.7|
17.417 | | |
| 13305.00 133.00| Convex Routing: Stream #2| 575.7 570.9|
17.833 | | |
| 132.00 133.00| Subarea (UH) Added to Stream #3| 0.0 298.5|
16.750 | | |
| 133.00 133.00| Stream #3 Added to: Stream #2| 570.9 750.3|
17.667 | | |

```

	133.00	133.00	Zero Out:	Stream #3	298.5	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	6343.0	7035.8
17.917						
	133.00	133.00	Zero Out:	Stream #2	750.3	0.0
	133.00	134.00	Convex Routing:	Stream #1	7035.8	7024.0
18.167						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	335.3
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	7024.0	7131.8
18.167						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	335.3	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	383.7
17.500						
	134.00	134.00	Stream #2 Added to:	Stream #1	7131.8	7455.0
18.083						
	134.00	134.00	Zero Out:	Stream #2	383.7	0.0
	134.00	137.00	Convex Routing:	Stream #1	7455.0	7443.6
18.333						
+-----+						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	251.9
16.500						
	137.00	137.00	Stream #2 Added to:	Stream #1	7443.6	7530.8
18.250						
	137.00	137.00	Zero Out:	Stream #2	251.9	0.0
	137.00	138.00	Convex Routing:	Stream #1	7530.8	7520.2
18.417						
	137.00	138.00	Subarea (UH) Added to	Stream #2	0.0	201.0
16.583						
+-----+						
	138.00	138.00	Stream #2 Added to:	Stream #1	7520.2	7589.1
18.417						
	138.00	138.00	Zero Out:	Stream #2	201.0	0.0
	138.00	139.00	Convex Routing:	Stream #1	7589.1	7585.8
18.500						
	138.00	139.00	Subarea (UH) Added to	Stream #2	0.0	125.5
16.333						
	139.00	139.00	Stream #2 Added to:	Stream #1	7585.8	7608.2
18.500						

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

|INPUT FILENAME: [EV10139C.DAT ]

Page: 3 of |

UPSTREAM	DOWNSTREAM		UPSTREAM	DOWNSTREAM
TIME (2) TO	MAX. STORAGE			
NODE #	NODE #	HYDROLOGIC/HYDRAULIC PROCESS	PEAK (CFS)	PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES		

139.00	139.00	Zero Out:	Stream #2	125.5	0.0
139.00	139.00	View:	Stream #1		7608.2
18.500	6023.88	3			

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 25-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV25126C.DAT
TIME/DATE OF STUDY: 07:40 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.187 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 312.40; DOWNSTREAM ELEVATION (FT) = 286.00
CHANNEL LENGTH (FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

=====

-----+-----

| \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

| INPUT FILENAME: [EV25126C.DAT ]

Page: 1 of |

-----+-----

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
-------------------	---------------------	--------------	------------------------------	---------------------	-----------------------

10100.00	119.00	18.167	Subarea (UH) Added to Stream #1	0.0	14804.4
119.00	12603.00	18.083	Convex Routing: Stream #1	14804.4	14714.2
810.00	809.00	16.250	Subarea (UH) Added to Stream #2	0.0	104.0
809.00	12603.00	16.417	Flow-Through Basin: Stream #2	104.0	56.3
12603.00	12603.00	18.083	Stream #2 Added to: Stream #1	14714.2	14744.1

12603.00	12603.00	18.250	Zero Out: Stream #2	56.3	0.0
12603.00	126.00	16.250	Convex Routing: Stream #1	14744.1	14721.1
920.00	905.00	16.250	Subarea (UH) Added to Stream #2	0.0	265.6
905.00	126.00	16.417	Flow-Through Basin: Stream #2	265.6	207.8
126.00	126.00	18.167	Stream #2 Added to: Stream #1	14721.1	14787.2

126.00	126.00	16.333	Zero Out: Stream #2	207.8	0.0
600.00	126.00	18.167	Subarea (UH) Added to Stream #2	0.0	76.6
126.00	126.00	18.167	Stream #2 Added to: Stream #1	14787.2	14799.0
126.00	126.00	16.250	Zero Out: Stream #2	76.6	0.0
126.00	126.00	18.167	View: Stream #1		14799.0

| Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

-----+-----

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 25-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV25127C.DAT
TIME/DATE OF STUDY: 07:39 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.187 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.294 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.268  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.249 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.346  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.373 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.507  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.420 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.655  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.369 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 11
=====
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV25127C.DAT ]
Page: 1 of 1
-----+-----
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
-----+-----
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0   14596.5|
18.167 | | |
| 119.00     12603.00| Convex Routing:      Stream #1| 14596.5   14510.3|
18.083 | | |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0    100.6|
16.250 | | |
| 809.00     12603.00| Flow-Through Basin: Stream #2|    100.6    54.4|
16.417 | | 13.48|
| 12603.00   12603.00| Stream #2 Added to: Stream #1| 14510.3   14540.2|
18.083 | | |
-----+-----
| 12603.00   12603.00| Zero Out:      Stream #2|    54.4    0.0|
| | |
| 12603.00   126.00| Convex Routing:      Stream #1| 14540.2   14518.5|
18.250 | | |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0    256.4|
16.250 | | |
| 905.00     126.00| Flow-Through Basin: Stream #2|    256.4    201.3|
16.417 | | 19.03|
| 126.00     126.00| Stream #2 Added to: Stream #1| 14518.5   14584.6|
18.167 | | |
-----+-----
| 126.00     126.00| Zero Out:      Stream #2|    201.3    0.0|
| | |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0    73.6|
16.333 | | |
| 126.00     126.00| Stream #2 Added to: Stream #1| 14584.6   14596.5|
18.167 | | |
| 126.00     126.00| Zero Out:      Stream #2|    73.6    0.0|
| | |
| 126.00     12720.50| Convex Routing:      Stream #1| 14596.5   14586.4|
18.333 | | |
-----+-----
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0   372.2|
16.333 | | |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0   247.7|
16.333 | | |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0    41.1|
16.417 | | |
| 331.00     331.00| Stream #4 Added to: Stream #2|    372.2   409.6|
16.333 | | |

```

	331.00	331.00	Zero Out:	Stream #4	41.1	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	409.6	657.2
16.333						
	331.00	331.00	Zero Out:	Stream #3	247.7	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	657.2	453.3
16.500		72.64				
	331.00	12720.50	Stream #2 Added to:	Stream #1	14586.4	14828.3
18.333						
	12720.50	12720.50	Zero Out:	Stream #2	453.3	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	14828.3	14807.2
18.417						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	210.8
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	14807.2	14855.0
18.417						
	127.00	127.00	Zero Out:	Stream #2	210.8	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	360.3
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	14855.0	14941.9
18.417						
	127.00	127.00	Zero Out:	Stream #2	360.3	0.0
	127.00	127.00	View:	Stream #1		14941.9
18.417		12343.57	3			

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 25-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV25137C.DAT
TIME/DATE OF STUDY: 08:28 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.187 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.294 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.268  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.249 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.346  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.373 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.507  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

```
*****
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

```
*****
```

```
FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.420 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.655
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
```

```
WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
```

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.387 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.628
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.257 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.356
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL  DEPTH  OUTFLOW  STORAGE
NUMBER    (FT)   (CFS)    (AF)
-----
1         0.00    0.00     0.000
2         1.00    1.84     0.260
3         2.00    3.22     1.160
4         3.00    4.16     2.520
5         4.00    4.94     3.990
6         5.00    5.60     5.550
7         6.00    7.17     7.200
8         7.00   14.13    8.950
9         8.00   18.54   10.800
10        9.00   21.90   12.740
11       10.00   24.73   14.750
12       11.00   37.17   16.920
13       12.00   57.63   19.160
14       13.00   83.32   21.500
15       14.00  112.96   23.940
16       15.00  133.28   26.480
17       16.00  144.34   29.150
18       17.00  154.45   31.950
19       18.00  163.94   34.870
20       19.00  172.92   37.940
21       20.00  181.39   41.140
22       21.00  189.45   44.500
23       22.00  197.22   48.010
24       23.00  466.70   51.740
25       24.00  951.81   53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.567
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.647 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.409  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.367 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.462
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.350 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.463
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.421 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.468
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 11  
=====

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

```
-----+-----+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV25137C.DAT ]
| Page: 1 of 1
|-----+-----+-----+
| UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM| |
| TIME (2) TO | MAX. STORAGE|                                     |                                     |
| NODE #      NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
| PEAK (HR)   | MODELED (AF)| FOOTNOTES |
|-----+-----+-----+
| 10100.00    119.00| Subarea (UH) Added to Stream #1|      0.0    13845.1|
18.167 |      |      |
| 119.00     12603.00| Convex Routing:      Stream #1| 13845.1    13773.0|
18.083 |      |      |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0     88.2|
16.250 |      |      |
| 809.00     12603.00| Flow-Through Basin: Stream #2|      88.2     47.6|
16.417 |      13.26|      |
| 12603.00    12603.00| Stream #2 Added to: Stream #1| 13773.0    13803.2|
18.083 |      |      |
|-----+-----+-----+
| 12603.00    12603.00| Zero Out:      Stream #2|      47.6     0.0|
|      |      |      |
| 12603.00    126.00| Convex Routing:      Stream #1| 13803.2    13787.5|
18.250 |      |      |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0     223.1|
16.250 |      |      |
| 905.00     126.00| Flow-Through Basin: Stream #2|      223.1    177.7|
16.417 |      18.66|      |
| 126.00     126.00| Stream #2 Added to: Stream #1| 13787.5    13854.1|
18.250 |      |      |
|-----+-----+-----+
| 126.00     126.00| Zero Out:      Stream #2|      177.7     0.0|
|      |      |      |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0     62.7|
16.333 |      |      |
| 126.00     126.00| Stream #2 Added to: Stream #1| 13854.1    13865.6|
18.167 |      |      |
| 126.00     126.00| Zero Out:      Stream #2|      62.7     0.0|
|      |      |      |
| 126.00    12720.50| Convex Routing:      Stream #1| 13865.6    13858.2|
18.333 |      |      |
|-----+-----+-----+
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0     333.5|
16.333 |      |      |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0     219.7|
16.333 |      |      |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0     36.5|
16.417 |      |      |
| 331.00     331.00| Stream #4 Added to: Stream #2|      333.5    366.9|
16.333 |      |      |
|-----+-----+-----+
```

	331.00	331.00	Zero Out:	Stream #4	36.5	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	366.9	586.6
16.333						
	331.00	331.00	Zero Out:	Stream #3	219.7	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	586.6	414.3
16.500		71.15				
	331.00	12720.50	Stream #2 Added to:	Stream #1	13858.2	14103.4
18.333						
	12720.50	12720.50	Zero Out:	Stream #2	414.3	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	14103.4	14087.0
18.417						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	183.7
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	14087.0	14136.3
18.417						
	127.00	127.00	Zero Out:	Stream #2	183.7	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	316.6
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	14136.3	14280.7
17.333						
	127.00	127.00	Zero Out:	Stream #2	316.6	0.0
	127.00	129.00	Convex Routing:	Stream #1	14280.7	14272.8
17.583						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	173.4
16.417						
	129.00	129.00	Stream #2 Added to:	Stream #1	14272.8	14346.2
17.500						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	173.4	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	101.1
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	101.1	18.5
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	18.5	15.2
17.333		3.90				
	221.00	222.00	Flow-Through Basin:	Stream #5	82.5	21.2
17.917		12.35				
+-----+						

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV25137C.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
223.00 17.583	222.00	Stream #5 Added to:	Stream #2	15.2 36.3
222.00	222.00	Zero Out:	Stream #5	21.2 0.0
222.00 17.500	129.00	Stream #2 Added to:	Stream #1	14346.2 14382.5
129.00	129.00	Zero Out:	Stream #2	36.3 0.0
129.00 17.583	133.00	Convex Routing:	Stream #1	14382.5 14377.8

13010.00 16.917	132.00	Subarea (UH) Added to	Stream #2	0.0 1106.3
132.00 16.917	132.00	Flowby Basin Model:	Stream #2	1106.3 973.6
132.00 17.417	132.00 19.76	Flow-Through Basin:	Stream #3	132.7 97.9
132.00 17.417	132.00	Split Hydrograph:	Stream #3	97.9 49.0
132.00 18.750	132.00 3.65	Flow-Through Basin:	Stream #3	49.0 12.2

132.00 16.917	132.00	Stream #3 Added to:	Stream #2	973.6 973.6
132.00	132.00	Zero Out:	Stream #3	12.2 0.0
132.00 18.750	132.00 3.88	Flow-Through Basin:	Stream #4	49.0 10.1
132.00 16.917	132.00	Stream #4 Added to:	Stream #2	973.6 973.6
132.00	132.00	Zero Out:	Stream #4	10.1 0.0

132.00 17.417	13305.00	Convex Routing:	Stream #2	973.6 943.2
13305.00 17.667	133.00	Convex Routing:	Stream #2	943.2 935.8
132.00 16.667	133.00	Subarea (UH) Added to	Stream #3	0.0 490.9
133.00 17.583	133.00	Stream #3 Added to:	Stream #2	935.8 1294.2

133.00 17.583	133.00	Zero Out:	Stream #3	490.9 0.0
133.00 17.750	133.00	Stream #2 Added to:	Stream #1	14377.8 15672.0
133.00	133.00	Zero Out:	Stream #2	1294.2 0.0
133.00 17.750	134.00	Convex Routing:	Stream #1	15672.0 15657.9
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0 571.3
134.00 17.750	134.00	Stream #2 Added to:	Stream #1	15657.9 15912.1
134.00	134.00	Zero Out:	Stream #2	571.3 0.0
13500.00 17.417	134.00	Subarea (UH) Added to	Stream #2	0.0 882.5
134.00 17.750	134.00	Stream #2 Added to:	Stream #1	15912.1 16751.6
134.00	134.00	Zero Out:	Stream #2	882.5 0.0
134.00 17.833	137.00	Convex Routing:	Stream #1	16751.6 16739.0
134.00 16.500	137.00	Subarea (UH) Added to	Stream #2	0.0 392.6
137.00 17.833	137.00	Stream #2 Added to:	Stream #1	16739.0 16921.4
137.00	137.00	Zero Out:	Stream #2	392.6 0.0
137.00 17.833	137.00 14269.33	View:	Stream #1	16921.4

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 25-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV25138C.DAT
TIME/DATE OF STUDY: 08:27 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.187 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.294 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.268  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.249 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.346  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.373 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.507  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.420 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.655  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.369 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.387 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.628
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.257 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.356
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)     (CFS)     (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.567
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.647 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.409  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.367 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.462
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.350 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.463
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.421 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.468
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70  
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.528 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.267; LOW LOSS FRACTION = 0.525  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV25138C.DAT ]
| Page: 1 of 1
-----+-----
|UPSTREAM  DOWNSTREAM|                |UPSTREAM  DOWNSTREAM| |
|TIME(2) TO | MAX. STORAGE|                |                |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) | PEAK (CFS) |
| PEAK (HR) | MODELED (AF) | FOOTNOTES |
-----+-----
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0 | 13782.2|
18.167 |                |                |                |
| 119.00     12603.00| Convex Routing:      Stream #1| 13782.2 | 13710.5|
18.083 |                |                |                |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0 | 87.3|
16.250 |                |                |                |
| 809.00     12603.00| Flow-Through Basin: Stream #2| 87.3 | 47.2|
16.417 | 13.24|                |                |
| 12603.00   12603.00| Stream #2 Added to: Stream #1| 13710.5 | 13740.7|
18.083 |                |                |                |
-----+-----
| 12603.00   12603.00| Zero Out:      Stream #2| 47.2 | 0.0|
|                |                |                |                |
| 12603.00   126.00| Convex Routing:      Stream #1| 13740.7 | 13726.0|
18.250 |                |                |                |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0 | 221.0|
16.250 |                |                |                |
| 905.00     126.00| Flow-Through Basin: Stream #2| 221.0 | 176.1|
16.417 | 18.63|                |                |
| 126.00     126.00| Stream #2 Added to: Stream #1| 13726.0 | 13792.9|
18.250 |                |                |                |
-----+-----
| 126.00     126.00| Zero Out:      Stream #2| 176.1 | 0.0|
|                |                |                |                |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0 | 62.0|
16.333 |                |                |                |
| 126.00     126.00| Stream #2 Added to: Stream #1| 13792.9 | 13804.4|
18.250 |                |                |                |
| 126.00     126.00| Zero Out:      Stream #2| 62.0 | 0.0|
|                |                |                |                |
| 126.00     12720.50| Convex Routing:      Stream #1| 13804.4 | 13797.1|
18.333 |                |                |                |
-----+-----
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0 | 330.9|
16.333 |                |                |                |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0 | 217.8|
16.333 |                |                |                |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0 | 36.2|
16.417 |                |                |                |
| 331.00     331.00| Stream #4 Added to: Stream #2| 330.9 | 364.0|
16.333 |                |                |                |

```

```

| 331.00     331.00| Zero Out:      Stream #4| 36.2 | 0.0|
|                |                |                |                |
-----+-----
| 331.00     331.00| Stream #3 Added to: Stream #2| 364.0 | 581.7|
16.333 |                |                |                |
| 331.00     331.00| Zero Out:      Stream #3| 217.8 | 0.0|
|                |                |                |                |
| 331.00     331.00| Flow-Through Basin: Stream #2| 581.7 | 411.4|
16.500 | 71.04|                |                |
| 331.00     12720.50| Stream #2 Added to: Stream #1| 13797.1 | 14042.6|
18.333 |                |                |                |
| 12720.50   12720.50| Zero Out:      Stream #2| 411.4 | 0.0|
|                |                |                |                |
-----+-----
| 12720.50   127.00| Convex Routing:      Stream #1| 14042.6 | 14026.3|
18.417 |                |                |                |
| 12710.00   127.00| Subarea (UH) Added to Stream #2|      0.0 | 181.7|
16.500 |                |                |                |
| 127.00     127.00| Stream #2 Added to: Stream #1| 14026.3 | 14075.8|
18.417 |                |                |                |
| 127.00     127.00| Zero Out:      Stream #2| 181.7 | 0.0|
|                |                |                |                |
| 50150.00   127.00| Subarea (UH) Added to Stream #2|      0.0 | 313.5|
16.417 |                |                |                |
-----+-----
| 127.00     127.00| Stream #2 Added to: Stream #1| 14075.8 | 14230.4|
17.333 |                |                |                |
| 127.00     127.00| Zero Out:      Stream #2| 313.5 | 0.0|
|                |                |                |                |
| 127.00     129.00| Convex Routing:      Stream #1| 14230.4 | 14219.9|
17.583 |                |                |                |
| 50300.00   129.00| Subarea (UH) Added to Stream #2|      0.0 | 171.6|
16.417 |                |                |                |
| 129.00     129.00| Stream #2 Added to: Stream #1| 14219.9 | 14295.3|
17.500 |                |                |                |
-----+-----
| 129.00     129.00| Zero Out:      Stream #2| 171.6 | 0.0|
|                |                |                |                |
| 210.00     221.00| Subarea (UH) Added to Stream #2|      0.0 | 100.2|
16.333 |                |                |                |
| 221.00     221.00| Flowby Basin Model: Stream #2| 100.2 | 18.5|
16.333 |                |                |                |
| 221.00     223.00| Flow-Through Basin: Stream #2| 18.5 | 15.1|
17.333 | 3.89|                |                |
| 221.00     222.00| Flow-Through Basin: Stream #5| 81.7 | 21.2|
17.917 | 12.31|                |                |
-----+-----
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
-----+-----

```

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV25138C.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|    15.1    36.2|
17.583 | |
| 222.00    222.00| Zero Out:           Stream #5|    21.2    0.0|
| |
| 222.00    129.00| Stream #2 Added to:  Stream #1|  14295.3  14331.5|
17.500 | |
| 129.00    129.00| Zero Out:           Stream #2|    36.2    0.0|
| |
| 129.00    133.00| Convex Routing:     Stream #1|  14331.5  14326.6|
17.583 | |
-----+-----+-----+-----+
| 13010.00   132.00| Subarea (UH) Added to Stream #2|    0.0    1097.4|
16.917 | |
| 132.00    132.00| Flowby Basin Model:  Stream #2|   1097.4   966.4|
16.917 | |
| 132.00    132.00| Flow-Through Basin:  Stream #3|    131.0    96.4|
17.417 | 19.74|
| 132.00    132.00| Split Hydrograph:   Stream #3|    96.4    48.2|
17.417 | |
| 132.00    132.00| Flow-Through Basin:  Stream #3|    48.2    12.2|
18.750 | 3.60|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to:  Stream #2|   966.4   966.4|
16.917 | |
| 132.00    132.00| Zero Out:           Stream #3|    12.2    0.0|
| |
| 132.00    132.00| Flow-Through Basin:  Stream #4|    48.2    10.0|
18.833 | 3.82|
| 132.00    132.00| Stream #4 Added to:  Stream #2|   966.4   966.4|
16.917 | |
| 132.00    132.00| Zero Out:           Stream #4|    10.0    0.0|
| |
-----+-----+-----+-----+
| 132.00   13305.00| Convex Routing:     Stream #2|   966.4   936.5|
17.417 | |
| 13305.00   133.00| Convex Routing:     Stream #2|   936.5   929.1|
17.667 | |
| 132.00    133.00| Subarea (UH) Added to Stream #3|    0.0    487.2|
16.667 | |
| 133.00    133.00| Stream #3 Added to:  Stream #2|   929.1  1286.8|
17.583 | |

```

	133.00	133.00	Zero Out:	Stream #3	487.2	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	14326.6	15613.4
17.583						
	133.00	133.00	Zero Out:	Stream #2	1286.8	0.0
	133.00	134.00	Convex Routing:	Stream #1	15613.4	15599.5
17.750						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	566.2
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	15599.5	15854.2
17.750						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	566.2	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	877.1
17.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	15854.2	16689.5
17.750						
	134.00	134.00	Zero Out:	Stream #2	877.1	0.0
	134.00	137.00	Convex Routing:	Stream #1	16689.5	16678.1
17.833						
+-----+						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	388.9
16.500						
	137.00	137.00	Stream #2 Added to:	Stream #1	16678.1	16861.0
17.833						
	137.00	137.00	Zero Out:	Stream #2	388.9	0.0
	137.00	138.00	Convex Routing:	Stream #1	16861.0	16850.1
18.000						
	137.00	138.00	Subarea (UH) Added to	Stream #2	0.0	345.9
16.583						
+-----+						
	138.00	138.00	Stream #2 Added to:	Stream #1	16850.1	17020.4
18.000						
	138.00	138.00	Zero Out:	Stream #2	345.9	0.0
	139.00	139.00	View:	Stream #1		17020.4
18.000						
	14434.24	3				
+-----+						
+-----+						
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL						
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM						
+-----+						
+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 25-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV25139C.DAT
TIME/DATE OF STUDY: 08:26 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.187 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.412
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.222 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.488
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.301 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.759
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.294 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.268  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.249 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.346  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.373 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.507  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.420 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.655  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.369 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.387 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.628
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.257 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.356
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.567
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.647 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.409  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 170.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.367 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.462
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.350 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.463
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 170.00; DOWNSTREAM ELEVATION(FT) = 135.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.421 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.468
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 135.00; DOWNSTREAM ELEVATION(FT) = 119.70  
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.528 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.267; LOW LOSS FRACTION = 0.525  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 119.70; DOWNSTREAM ELEVATION(FT) = 100.00  
CHANNEL LENGTH(FT) = 3107.78 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 428.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.247 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.207; LOW LOSS FRACTION = 0.508  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95  
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV25139C.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) PEAK (HR)	DOWNSTREAM NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00 18.167	119.00	Subarea (UH) Added to Stream #1	0.0	13751.3
119.00 18.083	12603.00	Convex Routing: Stream #1	13751.3	13679.6
810.00 16.250	809.00	Subarea (UH) Added to Stream #2	0.0	87.0
809.00 16.417	12603.00 13.24	Flow-Through Basin: Stream #2	87.0	47.1
12603.00 18.083	12603.00	Stream #2 Added to: Stream #1	13679.6	13709.8
12603.00 18.250	12603.00	Zero Out: Stream #2	47.1	0.0
12603.00 18.250	126.00	Convex Routing: Stream #1	13709.8	13695.8
920.00 16.250	905.00	Subarea (UH) Added to Stream #2	0.0	220.2
905.00 16.417	126.00 18.62	Flow-Through Basin: Stream #2	220.2	175.5
126.00 18.250	126.00	Stream #2 Added to: Stream #1	13695.8	13762.8
126.00 16.333	126.00	Zero Out: Stream #2	175.5	0.0
600.00 18.250	126.00	Subarea (UH) Added to Stream #2	0.0	61.7
126.00 18.333	126.00	Stream #2 Added to: Stream #1	13762.8	13774.3
126.00 18.333	126.00	Zero Out: Stream #2	61.7	0.0
126.00 18.333	12720.50	Convex Routing: Stream #1	13774.3	13766.9
320.00 16.333	331.00	Subarea (UH) Added to Stream #2	0.0	329.9
400.00 16.333	331.00	Subarea (UH) Added to Stream #3	0.0	217.0
390.00 16.417	331.00	Subarea (UH) Added to Stream #4	0.0	36.0
331.00 16.333	331.00	Stream #4 Added to: Stream #2	329.9	362.9

331.00 16.333	331.00	Zero Out: Stream #4	36.0	0.0
331.00 16.333	331.00	Stream #3 Added to: Stream #2	362.9	579.9
331.00 16.500	331.00 71.00	Zero Out: Stream #3	217.0	0.0
331.00 16.500	331.00	Flow-Through Basin: Stream #2	579.9	410.5
331.00 18.333	12720.50	Stream #2 Added to: Stream #1	13766.9	14012.5
12720.50 16.417	12720.50	Zero Out: Stream #2	410.5	0.0
12720.50 18.417	127.00	Convex Routing: Stream #1	14012.5	13996.4
12710.00 16.500	127.00	Subarea (UH) Added to Stream #2	0.0	181.1
127.00 18.417	127.00	Stream #2 Added to: Stream #1	13996.4	14045.9
127.00 16.417	127.00	Zero Out: Stream #2	181.1	0.0
50150.00 17.333	127.00	Subarea (UH) Added to Stream #2	0.0	312.5
127.00 17.333	127.00	Stream #2 Added to: Stream #1	14045.9	14204.2
127.00 17.500	127.00	Zero Out: Stream #2	312.5	0.0
127.00 17.500	129.00	Convex Routing: Stream #1	14204.2	14192.8
50300.00 16.417	129.00	Subarea (UH) Added to Stream #2	0.0	171.0
129.00 17.500	129.00	Stream #2 Added to: Stream #1	14192.8	14268.9
129.00 16.333	129.00	Zero Out: Stream #2	171.0	0.0
210.00 16.333	221.00	Subarea (UH) Added to Stream #2	0.0	99.8
221.00 16.333	221.00	Flowby Basin Model: Stream #2	99.8	18.4
221.00 17.333	223.00 3.89	Flow-Through Basin: Stream #2	18.4	15.1
221.00 17.917	222.00 12.30	Flow-Through Basin: Stream #5	81.4	21.1

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV25139C.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     |UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 15.1 36.1|
17.583 | |
| 222.00    222.00| Zero Out: Stream #5| 21.1 0.0|
| |
| 222.00    129.00| Stream #2 Added to: Stream #1| 14268.9 14305.0|
17.500 | |
| 129.00    129.00| Zero Out: Stream #2| 36.1 0.0|
| |
| 129.00    133.00| Convex Routing: Stream #1| 14305.0 14300.0|
17.583 | |
-----+-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0 1094.5|
16.917 | |
| 132.00    132.00| Flowby Basin Model: Stream #2| 1094.5 964.1|
16.917 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 130.4 96.0|
17.417 | 19.73|
| 132.00    132.00| Split Hydrograph: Stream #3| 96.0 48.0|
17.417 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 48.0 12.1|
18.750 | 3.58|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to: Stream #2| 964.1 964.1|
16.917 | |
| 132.00    132.00| Zero Out: Stream #3| 12.1 0.0|
| |
| 132.00    132.00| Flow-Through Basin: Stream #4| 48.0 10.0|
18.833 | 3.80|
| 132.00    132.00| Stream #4 Added to: Stream #2| 964.1 964.1|
16.917 | |
| 132.00    132.00| Zero Out: Stream #4| 10.0 0.0|
| |
-----+-----+-----+-----+
| 132.00    13305.00| Convex Routing: Stream #2| 964.1 934.3|
17.417 | |
| 13305.00  133.00| Convex Routing: Stream #2| 934.3 926.9|
17.667 | |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0 486.0|
16.667 | |
| 133.00    133.00| Stream #3 Added to: Stream #2| 926.9 1284.3|
17.583 | |

```

	133.00	133.00	Zero Out:	Stream #3	486.0	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	14300.0	15584.3
17.583						
	133.00	133.00	Zero Out:	Stream #2	1284.3	0.0
	133.00	134.00	Convex Routing:	Stream #1	15584.3	15570.6
17.750						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	564.5
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	15570.6	15825.5
17.750						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	564.5	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	875.5
17.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	15825.5	16660.1
17.667						
	134.00	134.00	Zero Out:	Stream #2	875.5	0.0
	134.00	137.00	Convex Routing:	Stream #1	16660.1	16648.7
17.833						
+-----+						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	387.7
16.500						
	137.00	137.00	Stream #2 Added to:	Stream #1	16648.7	16831.7
17.833						
	137.00	137.00	Zero Out:	Stream #2	387.7	0.0
	137.00	138.00	Convex Routing:	Stream #1	16831.7	16820.6
18.000						
	137.00	138.00	Subarea (UH) Added to	Stream #2	0.0	344.9
16.583						
+-----+						
	138.00	138.00	Stream #2 Added to:	Stream #1	16820.6	16991.0
18.000						
	138.00	138.00	Zero Out:	Stream #2	344.9	0.0
	138.00	139.00	Convex Routing:	Stream #1	16991.0	16982.4
18.000						
	138.00	139.00	Subarea (UH) Added to	Stream #2	0.0	174.3
16.333						
	139.00	139.00	Stream #2 Added to:	Stream #1	16982.4	17035.8
18.000						

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

|INPUT FILENAME: [EV25139C.DAT ]

Page: 3 of |

UPSTREAM	DOWNSTREAM		UPSTREAM	DOWNSTREAM
TIME (2) TO	MAX. STORAGE			
NODE #	NODE #	HYDROLOGIC/HYDRAULIC PROCESS	PEAK (CFS)	PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES		

139.00	139.00	Zero Out:	Stream #2	174.3	0.0
139.00	139.00	View:	Stream #1		17035.8
18.000	14486.89	3			

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV MAY 2023 ROKAMOTO \*

FILE NAME: EV50126C.DAT
TIME/DATE OF STUDY: 07:29 05/14/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====
*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.341; 30-MINUTE = 0.392; 1-HOUR = 0.432
3-HOUR = 0.782; 6-HOUR = 0.902; 24-HOUR = 0.943

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

=====

-----+-----

| \* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

| INPUT FILENAME: [EV50126C.DAT ]

Page: 1 of |

-----+-----

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM   NODE #   MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS   FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00 18.083	119.00 	Subarea (UH) Added to Stream #1	0.0	17667.7
119.00 18.083	12603.00 	Convex Routing: Stream #1	17667.7	17539.4
810.00 16.250	809.00 	Subarea (UH) Added to Stream #2	0.0	117.9
809.00 16.417	12603.00 13.93	Flow-Through Basin: Stream #2	117.9	69.1
12603.00 18.083	12603.00 	Stream #2 Added to: Stream #1	17539.4	17573.9

12603.00 18.167	12603.00 	Zero Out: Stream #2	69.1	0.0
12603.00 18.167	126.00 	Convex Routing: Stream #1	17573.9	17553.2
920.00 16.250	905.00 	Subarea (UH) Added to Stream #2	0.0	304.9
905.00 16.417	126.00 19.59	Flow-Through Basin: Stream #2	304.9	240.6
126.00 18.167	126.00 	Stream #2 Added to: Stream #1	17553.2	17633.4

126.00 16.333	126.00 	Zero Out: Stream #2	240.6	0.0
600.00 18.167	126.00 	Subarea (UH) Added to Stream #2	0.0	91.4
126.00 18.167	126.00 	Stream #2 Added to: Stream #1	17633.4	17648.3
126.00 18.167	126.00 	Zero Out: Stream #2	91.4	0.0
126.00 18.167	126.00 14259.34	View: Stream #1		17648.3
		3		

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV AUG 2023 ROKAMOTO \*

FILE NAME: EV50127C.DAT
TIME/DATE OF STUDY: 09:01 08/10/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.252  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.244 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.326  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.366 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.475  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.412 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.623  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.363 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.331; 30-MINUTE = 0.383; 1-HOUR = 0.424  
3-HOUR = 0.773; 6-HOUR = 0.898; 24-HOUR = 0.941

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 11
=====
>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<
=====

```

```

-----+-----
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV50127C.DAT ]
Page: 1 of 1
-----+-----
|UPSTREAM  DOWNSTREAM|                                     | UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS)  PEAK (CFS) |
PEAK (HR)   | MODELED (AF) | FOOTNOTES |
-----+-----
| 10100.00   119.00| Subarea (UH) Added to Stream #1|      0.0    17420.8|
18.083 | |
| 119.00     12603.00| Convex Routing:      Stream #1| 17420.8    17296.8|
18.083 | |
| 810.00     809.00| Subarea (UH) Added to Stream #2|      0.0     114.2|
16.250 | |
| 809.00     12603.00| Flow-Through Basin: Stream #2| 114.2     66.9|
16.417 | 13.86|
| 12603.00   12603.00| Stream #2 Added to: Stream #1| 17296.8    17331.4|
18.083 | |
-----+-----
| 12603.00   12603.00| Zero Out:      Stream #2|      66.9     0.0|
| |
| 12603.00   126.00| Convex Routing:      Stream #1| 17331.4    17312.2|
18.167 | |
| 920.00     905.00| Subarea (UH) Added to Stream #2|      0.0     294.6|
16.250 | |
| 905.00     126.00| Flow-Through Basin: Stream #2| 294.6     231.9|
16.417 | 19.49|
| 126.00     126.00| Stream #2 Added to: Stream #1| 17312.2    17393.2|
18.167 | |
-----+-----
| 126.00     126.00| Zero Out:      Stream #2|      231.9     0.0|
| |
| 600.00     126.00| Subarea (UH) Added to Stream #2|      0.0     87.8|
16.333 | |
| 126.00     126.00| Stream #2 Added to: Stream #1| 17393.2    17408.1|
18.167 | |
| 126.00     126.00| Zero Out:      Stream #2|      87.8     0.0|
| |
| 126.00     12720.50| Convex Routing:      Stream #1| 17408.1    17401.2|
18.250 | |
-----+-----
| 320.00     331.00| Subarea (UH) Added to Stream #2|      0.0     422.3|
16.333 | |
| 400.00     331.00| Subarea (UH) Added to Stream #3|      0.0     279.1|
16.333 | |
| 390.00     331.00| Subarea (UH) Added to Stream #4|      0.0     48.2|
16.417 | |
| 331.00     331.00| Stream #4 Added to: Stream #2| 422.3     466.4|
16.333 | |

```

	331.00	331.00	Zero Out:	Stream #4	48.2	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	466.4	745.5
16.333						
	331.00	331.00	Zero Out:	Stream #3	279.1	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	745.5	518.3
16.500		75.06				
	331.00	12720.50	Stream #2 Added to:	Stream #1	17401.2	17679.3
18.250						
	12720.50	12720.50	Zero Out:	Stream #2	518.3	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	17679.3	17647.4
18.333						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	246.5
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	17647.4	17711.2
18.333						
	127.00	127.00	Zero Out:	Stream #2	246.5	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	423.8
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	17711.2	17828.2
17.417						
	127.00	127.00	Zero Out:	Stream #2	423.8	0.0
	127.00	127.00	View:	Stream #1		17828.2
17.417		14732.92	3			
+-----+						

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV SEP 2023 MANZELMI \*

FILE NAME: EV50137C.DAT
TIME/DATE OF STUDY: 09:00 09/12/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.252  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.244 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.326  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.366 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.475  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1  
-----  
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<  
=====

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.412 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.623  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<  
=====

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.363 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.255 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.337
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00       0.00       0.000
2           1.00       1.84       0.260
3           2.00       3.22       1.160
4           3.00       4.16       2.520
5           4.00       4.94       3.990
6           5.00       5.60       5.550
7           6.00       7.17       7.200
8           7.00      14.13      8.950
9           8.00      18.54     10.800
10          9.00      21.90     12.740
11         10.00      24.73     14.750
12         11.00      37.17     16.920
13         12.00      57.63     19.160
14         13.00      83.32     21.500
15         14.00     112.96     23.940
16         15.00     133.28     26.480
17         16.00     144.34     29.150
18         17.00     154.45     31.950
19         18.00     163.94     34.870
20         19.00     172.92     37.940
21         20.00     181.39     41.140
22         21.00     189.45     44.500
23         22.00     197.22     48.010
24         23.00     466.70     51.740
25         24.00     951.81     53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 13010.00 TO NODE 132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.538
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.625 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.383  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394  
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 173.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.361 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.294 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.431
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 173.00; DOWNSTREAM ELEVATION(FT) = 133.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.414 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.441
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 11  
=====

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

```
-----+-----+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV50137C.DAT ]
| Page: 1 of |
+-----+-----+-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
| TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
| PEAK (HR) | MODELED (AF)| FOOTNOTES |
+-----+-----+-----+-----+-----+-----+
| 10100.00 119.00| Subarea (UH) Added to Stream #1| 0.0 16528.7|
18.083 | |
| 119.00 12603.00| Convex Routing: Stream #1| 16528.7 16421.8|
18.083 | |
| 810.00 809.00| Subarea (UH) Added to Stream #2| 0.0 100.2|
16.250 | |
| 809.00 12603.00| Flow-Through Basin: Stream #2| 100.2 59.0|
16.417 | 13.62|
| 12603.00 12603.00| Stream #2 Added to: Stream #1| 16421.8 16456.8|
18.083 | |
+-----+-----+-----+-----+-----+-----+
| 12603.00 12603.00| Zero Out: Stream #2| 59.0 0.0|
|
| 12603.00 126.00| Convex Routing: Stream #1| 16456.8 16443.0|
18.167 | |
| 920.00 905.00| Subarea (UH) Added to Stream #2| 0.0 257.1|
16.250 | |
| 905.00 126.00| Flow-Through Basin: Stream #2| 257.1 204.2|
16.417 | 19.08|
| 126.00 126.00| Stream #2 Added to: Stream #1| 16443.0 16527.3|
18.167 | |
+-----+-----+-----+-----+-----+-----+
| 126.00 126.00| Zero Out: Stream #2| 204.2 0.0|
|
| 600.00 126.00| Subarea (UH) Added to Stream #2| 0.0 75.2|
16.333 | |
| 126.00 126.00| Stream #2 Added to: Stream #1| 16527.3 16543.0|
18.167 | |
| 126.00 126.00| Zero Out: Stream #2| 75.2 0.0|
|
| 126.00 12720.50| Convex Routing: Stream #1| 16543.0 16535.3|
18.250 | |
+-----+-----+-----+-----+-----+-----+
| 320.00 331.00| Subarea (UH) Added to Stream #2| 0.0 378.4|
16.333 | |
| 400.00 331.00| Subarea (UH) Added to Stream #3| 0.0 248.1|
16.333 | |
| 390.00 331.00| Subarea (UH) Added to Stream #4| 0.0 42.7|
16.417 | |
| 331.00 331.00| Stream #4 Added to: Stream #2| 378.4 417.7|
16.333 | |
```

	331.00	331.00	Zero Out:	Stream #4	42.7	0.0
+-----+						
	331.00	331.00	Stream #3 Added to:	Stream #2	417.7	665.8
16.333						
	331.00	331.00	Zero Out:	Stream #3	248.1	0.0
	331.00	331.00	Flow-Through Basin:	Stream #2	665.8	474.1
16.500		73.38				
	331.00	12720.50	Stream #2 Added to:	Stream #1	16535.3	16817.4
18.250						
	12720.50	12720.50	Zero Out:	Stream #2	474.1	0.0
+-----+						
	12720.50	127.00	Convex Routing:	Stream #1	16817.4	16792.7
18.333						
	12710.00	127.00	Subarea (UH) Added to	Stream #2	0.0	215.8
16.500						
	127.00	127.00	Stream #2 Added to:	Stream #1	16792.7	16879.4
17.417						
	127.00	127.00	Zero Out:	Stream #2	215.8	0.0
	50150.00	127.00	Subarea (UH) Added to	Stream #2	0.0	372.0
16.417						
+-----+						
	127.00	127.00	Stream #2 Added to:	Stream #1	16879.4	17093.0
17.250						
	127.00	127.00	Zero Out:	Stream #2	372.0	0.0
	127.00	129.00	Convex Routing:	Stream #1	17093.0	17080.4
17.417						
	50300.00	129.00	Subarea (UH) Added to	Stream #2	0.0	206.0
16.417						
	129.00	129.00	Stream #2 Added to:	Stream #1	17080.4	17178.3
17.417						
+-----+						
	129.00	129.00	Zero Out:	Stream #2	206.0	0.0
	210.00	221.00	Subarea (UH) Added to	Stream #2	0.0	114.3
16.333						
	221.00	221.00	Flowby Basin Model:	Stream #2	114.3	19.4
16.333						
	221.00	223.00	Flow-Through Basin:	Stream #2	19.4	15.8
17.250		3.99				
	221.00	222.00	Flow-Through Basin:	Stream #5	94.9	26.0
17.917		14.98				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 |  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM  
 |

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV50137C.DAT ]

Page: 2 of

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
223.00 17.833	222.00	Stream #5 Added to:	Stream #2	15.8 41.6
222.00	222.00	Zero Out:	Stream #5	26.0 0.0
222.00 17.417	129.00	Stream #2 Added to:	Stream #1	17178.3 17219.4
129.00	129.00	Zero Out:	Stream #2	41.6 0.0
129.00 17.500	133.00	Convex Routing:	Stream #1	17219.4 17213.4

13010.00 16.833	132.00	Subarea (UH) Added to	Stream #2	0.0 1288.8
132.00 16.833	132.00	Flowby Basin Model:	Stream #2	1288.8 1121.2
132.00 17.083	132.00 20.72	Flow-Through Basin:	Stream #3	167.6 158.2
132.00 17.083	132.00	Split Hydrograph:	Stream #3	158.2 79.1
132.00 18.833	132.00 8.64	Flow-Through Basin:	Stream #3	79.1 17.8

132.00 16.833	132.00	Stream #3 Added to:	Stream #2	1121.2 1130.9
132.00	132.00	Zero Out:	Stream #3	17.8 0.0
132.00 18.833	132.00 8.74	Flow-Through Basin:	Stream #4	79.1 18.3
132.00 16.833	132.00	Stream #4 Added to:	Stream #2	1130.9 1138.7
132.00	132.00	Zero Out:	Stream #4	18.3 0.0

132.00 17.333	13305.00	Convex Routing:	Stream #2	1138.7 1126.1
13305.00 17.583	133.00	Convex Routing:	Stream #2	1126.1 1114.0
132.00 16.667	133.00	Subarea (UH) Added to	Stream #3	0.0 575.4
133.00 17.500	133.00	Stream #3 Added to:	Stream #2	1114.0 1542.3

133.00 17.500	133.00	Zero Out:	Stream #3	575.4 0.0
133.00 17.667	134.00	Convex Routing:	Stream #1	18755.7 18739.8
133.00 16.417	134.00	Subarea (UH) Added to	Stream #2	0.0 663.4
134.00 17.667	134.00	Stream #2 Added to:	Stream #1	18739.8 19050.7

134.00 17.750	134.00	Zero Out:	Stream #2	663.4 0.0
13500.00 17.333	134.00	Subarea (UH) Added to	Stream #2	0.0 1043.8
134.00 17.583	134.00	Stream #2 Added to:	Stream #1	19050.7 20061.4
134.00	134.00	Zero Out:	Stream #2	1043.8 0.0
134.00 17.750	137.00	Convex Routing:	Stream #1	20061.4 20044.8

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV SEP 2023 ROKAMOTO \*

FILE NAME: EV50138C.DAT
TIME/DATE OF STUDY: 09:00 09/12/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

=====

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.252  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

=====

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.244 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.326  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

-----  
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<  
=====

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.366 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.475  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

=====

\*\*\*\*\*

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

-----

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

=====

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2 THROUGH A FLOW-THROUGH DETENTION BASIN. SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.412 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.623  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.363 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.255 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.337
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

=====
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00    CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52    MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.538
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
 FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
 SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
 THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.625 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.383  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 173.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.361 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.294 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.431
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 173.00; DOWNSTREAM ELEVATION(FT) = 133.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.414 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.441
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 133.00; DOWNSTREAM ELEVATION(FT) = 119.70  
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.515 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.267; LOW LOSS FRACTION = 0.495  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392  
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

INPUT FILENAME: [EV50138C.DAT ]

Page: 1 of 1

UPSTREAM TIME (2) TO   NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE   NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS 	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00 18.083	119.00	Subarea (UH) Added to Stream #1	0.0	16454.1
119.00 18.083	12603.00	Convex Routing: Stream #1	16454.1	16348.2
810.00 16.250	809.00	Subarea (UH) Added to Stream #2	0.0	99.2
809.00 16.417	12603.00 13.60	Flow-Through Basin: Stream #2	99.2	58.4
12603.00 18.083	12603.00	Stream #2 Added to: Stream #1	16348.2	16383.2
12603.00 18.167	12603.00	Zero Out: Stream #2	58.4	0.0
12603.00 18.167	126.00	Convex Routing: Stream #1	16383.2	16369.9
920.00 16.250	905.00	Subarea (UH) Added to Stream #2	0.0	254.5
905.00 16.417	126.00 19.05	Flow-Through Basin: Stream #2	254.5	202.3
126.00 18.167	126.00	Stream #2 Added to: Stream #1	16369.9	16454.6
126.00 16.333	126.00	Zero Out: Stream #2	202.3	0.0
600.00 18.167	126.00	Subarea (UH) Added to Stream #2	0.0	74.3
126.00 16.333	126.00	Stream #2 Added to: Stream #1	16454.6	16470.3
126.00 18.250	126.00	Zero Out: Stream #2	74.3	0.0
126.00 18.250	12720.50	Convex Routing: Stream #1	16470.3	16462.4
320.00 16.333	331.00	Subarea (UH) Added to Stream #2	0.0	375.4
400.00 16.333	331.00	Subarea (UH) Added to Stream #3	0.0	245.9
390.00 16.417	331.00	Subarea (UH) Added to Stream #4	0.0	42.3
331.00 16.333	331.00	Stream #4 Added to: Stream #2	375.4	414.4

331.00 16.333	331.00	Zero Out: Stream #4	42.3	0.0
331.00 16.333	331.00	Stream #3 Added to: Stream #2	414.4	660.3
331.00 16.500	331.00	Zero Out: Stream #3	245.9	0.0
331.00 16.500	331.00	Flow-Through Basin: Stream #2	660.3	470.9
331.00 18.250	12720.50	Stream #2 Added to: Stream #1	16462.4	16744.9
12720.50 18.333	12720.50	Zero Out: Stream #2	470.9	0.0
12720.50 18.333	127.00	Convex Routing: Stream #1	16744.9	16720.8
12710.00 16.500	127.00	Subarea (UH) Added to Stream #2	0.0	213.6
127.00 17.417	127.00	Stream #2 Added to: Stream #1	16720.8	16814.0
127.00 16.417	127.00	Zero Out: Stream #2	213.6	0.0
50150.00 16.417	127.00	Subarea (UH) Added to Stream #2	0.0	368.3
127.00 17.250	127.00	Stream #2 Added to: Stream #1	16814.0	17032.0
127.00 17.417	127.00	Zero Out: Stream #2	368.3	0.0
127.00 17.417	129.00	Convex Routing: Stream #1	17032.0	17018.5
50300.00 16.417	129.00	Subarea (UH) Added to Stream #2	0.0	203.9
129.00 17.417	129.00	Stream #2 Added to: Stream #1	17018.5	17116.2
129.00 16.333	129.00	Zero Out: Stream #2	203.9	0.0
210.00 16.333	221.00	Subarea (UH) Added to Stream #2	0.0	113.3
221.00 16.333	221.00	Flowby Basin Model: Stream #2	113.3	19.3
221.00 17.250	223.00	Flow-Through Basin: Stream #2	19.3	15.8
221.00 18.000	222.00	Flow-Through Basin: Stream #5	94.0	25.8

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV50138C.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM|                                     |UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to: Stream #2| 15.8    41.3|
17.833 | |
| 222.00    222.00| Zero Out: Stream #5| 25.8    0.0|
| |
| 222.00    129.00| Stream #2 Added to: Stream #1| 17116.2 17157.0|
17.417 | |
| 129.00    129.00| Zero Out: Stream #2| 41.3    0.0|
| |
| 129.00    133.00| Convex Routing: Stream #1| 17157.0 17150.6|
17.500 | |
-----+-----+-----+-----+
| 13010.00  132.00| Subarea (UH) Added to Stream #2| 0.0    1278.8|
16.833 | |
| 132.00    132.00| Flowby Basin Model: Stream #2| 1278.8 1113.1|
16.833 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 165.7   156.4|
17.083 | 20.69|
| 132.00    132.00| Split Hydrograph: Stream #3| 156.4   78.2|
17.083 | |
| 132.00    132.00| Flow-Through Basin: Stream #3| 78.2   17.7|
18.833 | 8.56|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to: Stream #2| 1113.1 1122.8|
16.833 | |
| 132.00    132.00| Zero Out: Stream #3| 17.7   0.0|
| |
| 132.00    132.00| Flow-Through Basin: Stream #4| 78.2   18.2|
18.833 | 8.68|
| 132.00    132.00| Stream #4 Added to: Stream #2| 1122.8 1130.5|
16.833 | |
| 132.00    132.00| Zero Out: Stream #4| 18.2   0.0|
| |
-----+-----+-----+-----+
| 132.00    13305.00| Convex Routing: Stream #2| 1130.5 1118.2|
17.333 | |
| 13305.00  133.00| Convex Routing: Stream #2| 1118.2 1106.2|
17.583 | |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0    571.1|
16.667 | |
| 133.00    133.00| Stream #3 Added to: Stream #2| 1106.2 1533.6|
17.500 | |

```

	133.00	133.00	Zero Out:	Stream #3	571.1	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	17150.6	18684.2
17.500						
	133.00	133.00	Zero Out:	Stream #2	1533.6	0.0
	133.00	134.00	Convex Routing:	Stream #1	18684.2	18668.3
17.667						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	657.2
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	18668.3	18979.8
17.667						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	657.2	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	1037.4
17.333						
	134.00	134.00	Stream #2 Added to:	Stream #1	18979.8	19986.4
17.583						
	134.00	134.00	Zero Out:	Stream #2	1037.4	0.0
	134.00	137.00	Convex Routing:	Stream #1	19986.4	19969.5
17.750						
+-----+						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	449.5
16.500						
	137.00	137.00	Stream #2 Added to:	Stream #1	19969.5	20191.7
17.750						
	137.00	137.00	Zero Out:	Stream #2	449.5	0.0
	137.00	138.00	Convex Routing:	Stream #1	20191.7	20172.4
17.833						
	137.00	138.00	Subarea (UH) Added to	Stream #2	0.0	406.4
16.583						
+-----+						
	138.00	138.00	Stream #2 Added to:	Stream #1	20172.4	20389.4
17.833						
	138.00	138.00	Zero Out:	Stream #2	406.4	0.0
	138.00	138.00	View:	Stream #1		20389.4
17.833		17224.65	3			
+-----+						
+-----+						
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL						
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM						
+-----+						
+-----+						

END OF FLOODSCx ROUTING ANALYSIS

\*\*\*\*\*

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2010 Advanced Engineering Software (aes)
Ver. 17.0 Release Date: 07/01/2010 License ID 1527

Analysis prepared by:

\*\*\*\*\* DESCRIPTION OF STUDY \*\*\*\*\*
\* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139 \*
\* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - COMPLEX MODEL \*
\* 50-YR EV SEP 2023 ROKAMOTO \*

FILE NAME: EV50139C.DAT
TIME/DATE OF STUDY: 09:01 09/12/2023

\*\* INPUT SUMMARY \*\*

\*\*\*\*\*

FLOW PROCESS FROM NODE 10100.00 TO NODE 119.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<

WATERSHED AREA = 49495.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 2.043 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.400
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.46; 30-MINUTE = 0.87; 1-HOUR = 1.21
3-HOUR = 2.28; 6-HOUR = 3.40; 24-HOUR = 5.99
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 119.00 TO NODE 12603.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 341.63; DOWNSTREAM ELEVATION (FT) = 312.40

CHANNEL LENGTH (FT) = 3157.79 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 171.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.185 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.174; LOW LOSS FRACTION = 0.391
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*

FLOW PROCESS FROM NODE 809.00 TO NODE 12603.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-11 showing increasing values for depth, outflow, and storage.

\*\*\*\*\*

FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<

```

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 12603.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 12603.00 TO NODE 126.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 312.40; DOWNSTREAM ELEVATION(FT) = 286.00
CHANNEL LENGTH(FT) = 3046.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 553.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.219 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.254; LOW LOSS FRACTION = 0.457
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.79; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE(AF) = 0.000
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

```

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	625.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

```

=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 600.00 TO NODE 126.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 218.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.290; LOW LOSS FRACTION = 0.732
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 6
-----

```

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 126.00 TO NODE 12720.50 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 286.00; DOWNSTREAM ELEVATION(FT) = 258.00  
CHANNEL LENGTH(FT) = 4077.05 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 320.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<

WATERSHED AREA = 712.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.289 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.100; LOW LOSS FRACTION = 0.252  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 400.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<

WATERSHED AREA = 462.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.244 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135; LOW LOSS FRACTION = 0.326  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 390.00 TO NODE 331.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<

WATERSHED AREA = 117.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.366 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.283; LOW LOSS FRACTION = 0.475  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2  
THROUGH A FLOW-THROUGH DETENTION BASIN.  
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:  
DEAD STORAGE(AF) = 0.000  
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE(CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000
16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

\*\*\*\*\*  
FLOW PROCESS FROM NODE 331.00 TO NODE 12720.50 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 12720.50 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 12720.50 TO NODE 127.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00  
UPSTREAM ELEVATION(FT) = 258.00; DOWNSTREAM ELEVATION(FT) = 240.00  
CHANNEL LENGTH(FT) = 3114.00 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00

\*\*\*\*\*

FLOW PROCESS FROM NODE 12710.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 711.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.412 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.293; LOW LOSS FRACTION = 0.623  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1063.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.363 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

```

=====
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 240.00; DOWNSTREAM ELEVATION (FT) = 213.00
CHANNEL LENGTH (FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE 50300.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 634.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.379 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.282; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 213.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE

```

```

*USER ENTERED "LAG" TIME = 0.255 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.128; LOW LOSS FRACTION = 0.337
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

*****
FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 25.00 13.59
2 75.00 16.84
3 100.00 18.46
4 250.00 28.22
5 550.00 47.73
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5
=====
*****
FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:
INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 0.01 0.310
3 2.00 0.83 1.240
4 3.00 5.60 2.600
5 4.00 16.88 4.130
6 5.00 23.48 5.790
7 6.00 36.73 7.560
8 7.00 55.95 9.440
9 8.00 78.70 11.430
10 9.00 228.67 12.460

```

```

=====
*****
FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) =      0.000
SPECIFIED DEAD STORAGE (AF) FILLED =      0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET =      0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) =      0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL    DEPTH    OUTFLOW    STORAGE
NUMBER      (FT)      (CFS)      (AF)
-----
1           0.00      0.00      0.000
2           1.00      1.84      0.260
3           2.00      3.22      1.160
4           3.00      4.16      2.520
5           4.00      4.94      3.990
6           5.00      5.60      5.550
7           6.00      7.17      7.200
8           7.00     14.13     8.950
9           8.00     18.54    10.800
10          9.00     21.90    12.740
11         10.00     24.73    14.750
12         11.00     37.17    16.920
13         12.00     57.63    19.160
14         13.00     83.32    21.500
15         14.00    112.96    23.940
16         15.00    133.28    26.480
17         16.00    144.34    29.150
18         17.00    154.45    31.950
19         18.00    163.94    34.870
20         19.00    172.92    37.940
21         20.00    181.39    41.140
22         21.00    189.45    44.500
23         22.00    197.22    48.010
24         23.00    466.70    51.740
25         24.00    951.81    53.820
=====
*****
FLOW PROCESS FROM NODE    223.00 TO NODE    222.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    222.00 TO NODE    129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE    129.00 TO NODE    133.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION (FT) = 213.00; DOWNSTREAM ELEVATION (FT) = 212.00
CHANNEL LENGTH (FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00
=====
*****
FLOW PROCESS FROM NODE    13010.00 TO NODE    132.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.538
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932
=====
*****
FLOW PROCESS FROM NODE    132.00 TO NODE    132.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<
=====

```

MODEL STREAM NUMBER 2 FLOWING PAST A FLOWBY STRUCTURE:  
FLOWRATES IN STREAM # 2 WHICH ARE GREATER THAN Qpass IN  
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	413.00	413.00
2	1897.00	1613.00
3	4682.00	3013.00
4	6819.00	4013.00
5	8100.00	4613.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 5.700  
SPECIFIED DEAD STORAGE (AF) FILLED = 5.700  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.50	0.01	0.002
3	2.00	0.02	1.900
4	4.00	0.03	16.100
5	4.30	0.05	18.200
6	5.00	314.00	23.200
7	6.00	1306.00	30.300
8	7.00	2847.00	39.100
9	8.00	4942.00	47.800

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 8

>>>>MODEL STREAM SPLITFLOW WHERE 0.50 OF STREAM 3 IS ADDED TO STREAM 4<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.99	2.90	0.900
3	1.99	11.38	2.900
4	3.99	19.63	10.300
5	5.99	25.19	20.700
6	7.99	29.71	31.700
7	9.99	33.62	43.500
8	10.99	35.49	49.700
9	11.99	313.49	56.400
10	12.99	894.27	63.100
11	13.99	1748.55	69.900
12	15.99	4306.91	84.100

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<

\*\*\*\*\*

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.1

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #4<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4  
THROUGH A FLOW-THROUGH DETENTION BASIN.

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE (AF) = 0.000  
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000  
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000  
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	0.48	0.70	0.400

3	1.48	6.50	1.800
4	3.48	18.11	8.500
5	5.48	23.99	17.900
6	7.48	28.68	27.800
7	9.48	32.70	38.300
8	10.48	34.50	43.900
9	11.48	36.29	49.400
10	12.48	314.07	55.900
11	13.48	895.00	62.300
12	15.48	2882.95	74.700

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 13305.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 427.51; DOWNSTREAM ELEVATION (FT) = 315.00  
CHANNEL LENGTH (FT) = 9760.05 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 13305.00 TO NODE 133.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #2 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO  
ROUTE THE STREAM 2 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 (FT) = 315.00; DOWNSTREAM ELEVATION (FT) = 212.00

CHANNEL LENGTH(FT) = 6877.24 MANNING'S FACTOR = 0.040  
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*  
FLOW PROCESS FROM NODE 132.00 TO NODE 133.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<

WATERSHED AREA = 1713.900 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.625 HOURS  
VALLEY (DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225; LOW LOSS FRACTION = 0.383  
SPECIFIED PEAK RAINFALL DEPTHS (INCH):

5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12

\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*  
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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,

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 212.00; DOWNSTREAM ELEVATION(FT) = 173.00
CHANNEL LENGTH(FT) = 6461.31 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1705.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.361 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.245; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 13500.00 TO NODE 134.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 3859.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 1.294 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.284; LOW LOSS FRACTION = 0.431
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 134.00 IS CODE = 6

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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) = 200.00 CHANNEL Z = 4.00
UPSTREAM ELEVATION(FT) = 173.00; DOWNSTREAM ELEVATION(FT) = 133.00
CHANNEL LENGTH(FT) = 6064.09 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

\*\*\*\*\*
FLOW PROCESS FROM NODE 134.00 TO NODE 137.00 IS CODE = 1

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<

WATERSHED AREA = 1240.700 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
\*USER ENTERED "LAG" TIME = 0.414 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.237; LOW LOSS FRACTION = 0.441
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 7

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<

\*\*\*\*\*
FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 6

=====  
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 133.00; DOWNSTREAM ELEVATION(FT) = 119.70  
CHANNEL LENGTH(FT) = 4643.67 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 1303.500 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.515 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.267; LOW LOSS FRACTION = 0.495  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 138.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 5.2  
-----

>>>>MODEL CHANNEL ROUTING OF STREAM #1 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 = 4.00  
UPSTREAM ELEVATION(FT) = 119.70; DOWNSTREAM ELEVATION(FT) = 100.00  
CHANNEL LENGTH(FT) = 3107.78 MANNING'S FACTOR = 0.030  
CONSTANT LOSS RATE(CFS) = 0.00  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 1  
-----

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<  
=====

WATERSHED AREA = 428.000 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE  
\*USER ENTERED "LAG" TIME = 0.245 HOURS  
VALLEY(DEVELOPED) S-GRAPH SELECTED  
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.207; LOW LOSS FRACTION = 0.487  
SPECIFIED PEAK RAINFALL DEPTHS(INCH):  
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06  
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12  
\*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:  
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391  
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7  
-----

>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6  
-----

>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<  
=====

\*\*\*\*\*  
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 11  
-----

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<  
=====

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

|INPUT FILENAME: [EV50139C.DAT ]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	0.0	16432.4
18.083			
119.00	12603.00	16432.4	16327.0
18.083			
810.00	809.00	0.0	98.9
16.250			
809.00	12603.00	98.9	58.2
16.417	13.60		
12603.00	12603.00	16327.0	16362.0
18.083			
12603.00	12603.00	58.2	0.0
18.167			
12603.00	126.00	16362.0	16348.8
18.167			
920.00	905.00	0.0	253.6
16.250			
905.00	126.00	253.6	201.7
16.417	19.04		
126.00	126.00	16348.8	16433.7
18.167			
126.00	126.00	201.7	0.0
18.167			
600.00	126.00	0.0	74.0
16.333			
126.00	126.00	16433.7	16449.4
18.167			
126.00	126.00	74.0	0.0
18.167			
126.00	12720.50	16449.4	16441.5
18.250			
320.00	331.00	0.0	374.3
16.333			
400.00	331.00	0.0	245.1
16.333			
390.00	331.00	0.0	42.1
16.417			
331.00	331.00	374.3	413.2
16.333			

331.00	331.00	Zero Out:	Stream #4	42.1	0.0
16.333					
331.00	331.00	Zero Out:	Stream #3	245.1	0.0
16.333					
331.00	331.00	Flow-Through Basin:	Stream #2	658.3	469.8
16.500	73.22				
331.00	12720.50	Stream #2 Added to:	Stream #1	16441.5	16724.1
18.250					
12720.50	12720.50	Zero Out:	Stream #2	469.8	0.0
18.250					
12720.50	127.00	Convex Routing:	Stream #1	16724.1	16700.1
18.333					
12710.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	212.8
16.500					
127.00	127.00	Stream #2 Added to:	Stream #1	16700.1	16795.6
17.417					
127.00	127.00	Zero Out:	Stream #2	212.8	0.0
18.083					
50150.00	127.00	Subarea (UH) Added to:	Stream #2	0.0	367.0
16.417					
127.00	127.00	Stream #2 Added to:	Stream #1	16795.6	17014.6
17.250					
127.00	127.00	Zero Out:	Stream #2	367.0	0.0
18.167					
127.00	129.00	Convex Routing:	Stream #1	17014.6	17000.8
17.417					
50300.00	129.00	Subarea (UH) Added to:	Stream #2	0.0	203.2
16.417					
129.00	129.00	Stream #2 Added to:	Stream #1	17000.8	17098.6
17.417					
129.00	129.00	Zero Out:	Stream #2	203.2	0.0
18.167					
210.00	221.00	Subarea (UH) Added to:	Stream #2	0.0	112.9
16.333					
221.00	221.00	Flowby Basin Model:	Stream #2	112.9	19.3
16.333					
221.00	223.00	Flow-Through Basin:	Stream #2	19.3	15.8
17.250	3.98				
221.00	222.00	Flow-Through Basin:	Stream #5	93.6	25.8
18.000	14.93				

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

```

-----+-----
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV50139C.DAT ]
Page: 2 of |
-----+-----+-----+-----+
|UPSTREAM  DOWNSTREAM|                                     |UPSTREAM  DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 223.00    222.00| Stream #5 Added to:  Stream #2|    15.8    41.3|
17.833 |          |          |
| 222.00    222.00| Zero Out:           Stream #5|    25.8    0.0|
|          |          |          |
| 222.00    129.00| Stream #2 Added to:  Stream #1| 17098.6   17139.2|
17.417 |          |          |
| 129.00    129.00| Zero Out:           Stream #2|    41.3    0.0|
|          |          |          |
| 129.00    133.00| Convex Routing:     Stream #1| 17139.2   17132.7|
17.500 |          |          |
-----+-----+-----+-----+
| 13010.00   132.00| Subarea (UH) Added to Stream #2|    0.0    1275.6|
16.833 |          |          |
| 132.00    132.00| Flowby Basin Model: Stream #2| 1275.6    1110.5|
16.833 |          |          |
| 132.00    132.00| Flow-Through Basin: Stream #3| 165.1     155.9|
17.083 |          | 20.69|
| 132.00    132.00| Split Hydrograph:   Stream #3| 155.9     77.9|
17.083 |          |          |
| 132.00    132.00| Flow-Through Basin: Stream #3| 77.9      17.7|
18.833 |          | 8.54|
-----+-----+-----+-----+
| 132.00    132.00| Stream #3 Added to:  Stream #2| 1110.5    1120.1|
16.833 |          |          |
| 132.00    132.00| Zero Out:           Stream #3| 17.7      0.0|
|          |          |          |
| 132.00    132.00| Flow-Through Basin: Stream #4| 77.9      18.2|
18.833 |          | 8.66|
| 132.00    132.00| Stream #4 Added to:  Stream #2| 1120.1    1127.9|
16.833 |          |          |
| 132.00    132.00| Zero Out:           Stream #4| 18.2      0.0|
|          |          |          |
-----+-----+-----+-----+
| 132.00   13305.00| Convex Routing:     Stream #2| 1127.9    1115.6|
17.333 |          |          |
| 13305.00   133.00| Convex Routing:     Stream #2| 1115.6    1103.7|
17.583 |          |          |
| 132.00    133.00| Subarea (UH) Added to Stream #3|    0.0     569.7|
16.667 |          |          |
| 133.00    133.00| Stream #3 Added to:  Stream #2| 1103.7    1530.7|
17.500 |          |          |

```

	133.00	133.00	Zero Out:	Stream #3	569.7	0.0
+-----+						
	133.00	133.00	Stream #2 Added to:	Stream #1	17132.7	18663.4
17.500						
	133.00	133.00	Zero Out:	Stream #2	1530.7	0.0
	133.00	134.00	Convex Routing:	Stream #1	18663.4	18647.6
17.667						
	133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	655.1
16.417						
	134.00	134.00	Stream #2 Added to:	Stream #1	18647.6	18959.3
17.667						
+-----+						
	134.00	134.00	Zero Out:	Stream #2	655.1	0.0
	13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	1035.5
17.333						
	134.00	134.00	Stream #2 Added to:	Stream #1	18959.3	19964.9
17.583						
	134.00	134.00	Zero Out:	Stream #2	1035.5	0.0
	134.00	137.00	Convex Routing:	Stream #1	19964.9	19948.1
17.750						
+-----+						
	134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	448.1
16.500						
	137.00	137.00	Stream #2 Added to:	Stream #1	19948.1	20170.4
17.750						
	137.00	137.00	Zero Out:	Stream #2	448.1	0.0
	137.00	138.00	Convex Routing:	Stream #1	20170.4	20151.5
17.833						
	137.00	138.00	Subarea (UH) Added to	Stream #2	0.0	405.1
16.583						
+-----+						
	138.00	138.00	Stream #2 Added to:	Stream #1	20151.5	20368.7
17.833						
	138.00	138.00	Zero Out:	Stream #2	405.1	0.0
	138.00	139.00	Convex Routing:	Stream #1	20368.7	20363.6
17.917						
	138.00	139.00	Subarea (UH) Added to	Stream #2	0.0	198.5
16.333						
	139.00	139.00	Stream #2 Added to:	Stream #1	20363.6	20427.2
17.917						

[Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

\* AES FLOODSCx PROGRAM RESULTS SUMMARY \*

|INPUT FILENAME: [EV50139C.DAT ]

Page: 3 of |

UPSTREAM	DOWNSTREAM		UPSTREAM	DOWNSTREAM
TIME (2) TO	MAX. STORAGE			
NODE #	NODE #	HYDROLOGIC/HYDRAULIC PROCESS	PEAK (CFS)	PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES		

139.00	139.00	Zero Out:	Stream #2	198.5	0.0
139.00	139.00	View:	Stream #1		20427.2
17.917	17283.88	3			

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL  
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS