THE RANCH PLAN PLANNED COMMUNITY

PLANNING AREAS 3 AND 4 RUNOFF MANAGEMENT PLAN

Michael Baker INTERNATIONAL

TECHNICAL APPENDIX G.4

UH Expected Value – Free Draining

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______________________________________________________________________________
******************************************************************************

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

                       Michael Baker International
                     5 Hutton Centre Drive, Suite 500
                          Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 119                                 *
* 2-YR EV APRIL 2019 FKAZI                                               *
 ************************************************************************

  FILE NAME: EV02119F.DAT
  TIME/DATE OF STUDY: 12:04 04/10/2019


                        ** 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 = 0.345; 30-MINUTE = 0.395;  1-HOUR = 0.435
    3-HOUR = 0.785;    6-HOUR = 0.904; 24-HOUR = 0.944


******************************************************************************
  FLOW PROCESS FROM NODE    119.00 TO NODE    119.00 IS CODE =  11
------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
==============================================================================
==============================================================================
```



```
 +-------------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV02119F.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       525.2|
20.417 |             |           |
 |   119.00     119.00| View:                  Stream #1|                 525.2|
20.417 |       547.46|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 126                                *
* 2-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV02126F.DAT
  TIME/DATE OF STUDY: 14:18 06/06/2019


                       ** 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  12603.00 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 =    0.141 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  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    126.00 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    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 =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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: [EV02126F.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       520.1|
20.417 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|     520.1       518.3|
20.500 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        19.4|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|     518.3       520.4|
20.500 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      19.4         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|     520.4       519.1|
20.583 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        18.9|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     519.1       521.7|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      18.9         0.0|
|             |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         0.9|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     521.7       521.8|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       0.9         0.0|
|             |           |
 |   126.00     126.00| View:                 Stream #1|                 521.8|
20.583 |       561.16|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 127                                *
* 2-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV02127F.DAT
  TIME/DATE OF STUDY: 06:37 06/12/2019


                       ** 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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  12603.00 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 =    0.141 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


**************************************************************************
  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    126.00 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.299 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.292; LOW LOSS FRACTION = 0.536
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 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) =  0.276; LOW LOSS FRACTION = 0.517
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.380 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.251; LOW LOSS FRACTION = 0.478
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.486; LOW LOSS FRACTION = 0.820
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.541 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.592; LOW LOSS FRACTION = 0.985
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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: [EV02127F.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       514.8|
20.417 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|     514.8       513.3|
20.500 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        19.0|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|     513.3       515.4|
20.500 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      19.0         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|     515.4       514.3|
20.583 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        18.6|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     514.3       516.9|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      18.6         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         0.9|
16.417 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     516.9       517.1|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       0.9         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|     517.1       516.3|
20.750 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        35.1|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        17.0|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      35.1        50.4|
16.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      17.0         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|     516.3       523.2|
20.750 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      50.4         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|     523.2       522.9|
20.833 |             |           |
 +--------------------+----------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0        77.3|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0         6.8|
16.583 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|      77.3        83.4|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|       6.8         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|     522.9       536.0|
20.833 |             |           |
 +--------------------+----------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|      83.4         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|     536.0       535.7|
20.833 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0         2.8|
16.583 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|     535.7       536.2|
20.833 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|       2.8         0.0|
|            |           |
 +--------------------+----------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00     127.00| View:                 Stream #1|                 536.2|
20.833 |       627.34|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133C                              *
* 2-YR EV JUNE 2019 ROKAMOTO                                           *
 **************************************************************************

  FILE NAME: EV0233CF.DAT
  TIME/DATE OF STUDY: 06:36 06/12/2019


                        ** 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 = 0.308; 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  12603.00 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 =    0.141 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 = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936


**************************************************************************
  FLOW PROCESS FROM NODE  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    126.00 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 = 0.308; 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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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 = 0.308; 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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.299 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.292; LOW LOSS FRACTION = 0.536
  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 = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 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) =  0.276; LOW LOSS FRACTION = 0.517
  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 = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.380 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.251; LOW LOSS FRACTION = 0.478
  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 = 0.308; 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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.486; LOW LOSS FRACTION = 0.820
  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 = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.541 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.592; LOW LOSS FRACTION = 0.985
  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 = 0.308; 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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.434; LOW LOSS FRACTION = 0.737
  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 = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.256 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.553; LOW LOSS FRACTION = 0.923
  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 = 0.308; 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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.274 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.253; LOW LOSS FRACTION = 0.494
  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 = 0.308; 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    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 =  0.28;  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 = 0.308; 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  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 =    1715.900 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 = 0.750
  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 = 0.308; 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: [EV0233CF.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       508.6|
20.417 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|     508.6       507.2|
20.500 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        17.8|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|     507.2       509.3|
20.500 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      17.8         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|     509.3       508.3|
20.583 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        17.5|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     508.3       511.0|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      17.5         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         0.8|
16.417 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     511.0       511.1|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       0.8         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|     511.1       510.4|
20.750 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        33.0|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        16.0|
16.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      33.0        47.4|
16.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      16.0         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|     510.4       517.3|
20.750 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      47.4         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|     517.3       517.1|
20.833 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0        73.0|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0         6.4|
16.583 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|      73.0        78.8|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|       6.4         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|     517.1       530.1|
20.833 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|      78.8         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|     530.1       529.9|
20.833 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0         2.6|
16.583 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|     529.9       530.4|
20.833 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|       2.6         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|     530.4       530.1|
21.000 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0        58.9|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|      58.9        58.2|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|     530.1       540.1|
20.917 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|      58.2         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|     540.1       539.9|
21.083 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0         7.8|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     539.9       541.0|
21.083 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|       7.8         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        25.7|
16.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV0233CF.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 |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     541.0       544.4|
21.083 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      25.7         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|     544.4       544.3|
21.167 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       134.5|
17.333 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     134.5       133.0|
17.917 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     133.0       132.4|
18.250 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0        72.1|
17.000 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     132.4       193.4|
17.167 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|      72.1         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|     544.3       704.6|
17.583 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     193.4         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                 704.6|
17.583 |       815.31|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133T                              *
* 2-YR EV APRIL 2019 FKAZI                                             *
 **************************************************************************

  FILE NAME: EV0233TF.DAT
  TIME/DATE OF STUDY: 12:02 04/10/2019


                       ** 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 = 0.986


**************************************************************************
  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 =    1715.900 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 = 0.750
  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 = 0.986


**************************************************************************
  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: [EV0233TF.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 |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       352.4|
17.333 |             |           |
 |   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       179.8|
17.000 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     329.9       403.3|
17.917 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #3|     179.8         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|       0.0       403.3|
17.917 |             |           |
 |   133.00     133.00| Zero Out:             Stream #2|     403.3         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                 403.3|
17.917 |       171.09|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 133U                               *
* 2-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0233UF.DAT
  TIME/DATE OF STUDY: 06:36 06/12/2019


                        ** 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 = 0.328; 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  12603.00 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 =    0.141 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 = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940


**************************************************************************
  FLOW PROCESS FROM NODE  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    126.00 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 = 0.328; 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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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 = 0.328; 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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.299 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.292; LOW LOSS FRACTION = 0.536
  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 = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 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) =  0.276; LOW LOSS FRACTION = 0.517
  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 = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.380 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.251; LOW LOSS FRACTION = 0.478
  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 = 0.328; 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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.486; LOW LOSS FRACTION = 0.820
  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 = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.541 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.592; LOW LOSS FRACTION = 0.985
  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 = 0.328; 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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.434; LOW LOSS FRACTION = 0.737
  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 = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.256 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.553; LOW LOSS FRACTION = 0.923
  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 = 0.328; 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    129.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.274 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.253; LOW LOSS FRACTION = 0.494
  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 = 0.328; 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    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: [EV0233UF.DAT]

Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	513.4	20.417		
119.00	12603.00	Convex Routing: Stream #1	513.4	511.9	20.500		
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	18.8	16.167		
12603.00	12603.00	Stream #2 Added to: Stream #1	511.9	514.0	20.500		
12603.00	12603.00	Zero Out: Stream #2	18.8	0.0			
12603.00	126.00	Convex Routing: Stream #1	514.0	512.9	20.583		
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	18.3	16.333		
126.00	126.00	Stream #2 Added to: Stream #1	512.9	515.5	20.583		
126.00	126.00	Zero Out: Stream #2	18.3	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	0.9	16.417		
126.00	126.00	Stream #2 Added to: Stream #1	515.5	515.7	20.583		
126.00	126.00	Zero Out: Stream #2	0.9	0.0			
126.00	12720.50	Convex Routing: Stream #1	515.7	514.9	20.750		
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	34.7	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	16.8	16.250		
12720.50	12720.50	Stream #3 Added to: Stream #2	34.7	49.7	16.333		
12720.50	12720.50	Zero Out: Stream #3	16.8	0.0			
12720.50	12720.50	Stream #2 Added to: Stream #1	514.9	521.8	20.750		
12720.50	12720.50	Zero Out: Stream #2	49.7	0.0			

12720.50	12741.00	Convex Routing: Stream #1	521.8	521.6	20.833		
320.00	12741.00	Subarea (UH) Added to Stream #2	0.0	76.3	16.417		
390.00	12741.00	Subarea (UH) Added to Stream #4	0.0	6.7	16.583		
12741.00	12741.00	Stream #4 Added to: Stream #2	76.3	82.4	16.417		
12741.00	12741.00	Zero Out: Stream #4	6.7	0.0			
12741.00	12741.00	Stream #2 Added to: Stream #1	521.6	534.6	20.833		
12741.00	12741.00	Zero Out: Stream #2	82.4	0.0			
12741.00	127.00	Convex Routing: Stream #1	534.6	534.4	20.833		
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	2.7	16.583		
127.00	127.00	Stream #2 Added to: Stream #1	534.4	534.9	20.833		
127.00	127.00	Zero Out: Stream #2	2.7	0.0			
127.00	12902.00	Convex Routing: Stream #1	534.9	534.6	21.000		
50220.00	50347.00	Subarea (UH) Added to Stream #2	0.0	61.5	16.500		
50347.00	12902.00	Convex Routing: Stream #2	61.5	60.8	16.583		
12902.00	12902.00	Stream #2 Added to: Stream #1	534.6	544.5	21.000		
12902.00	12902.00	Zero Out: Stream #2	60.8	0.0			
12902.00	129.00	Convex Routing: Stream #1	544.5	544.3	21.083		
50400.00	129.00	Subarea (UH) Added to Stream #2	0.0	8.2	16.333		
129.00	129.00	Stream #2 Added to: Stream #1	544.3	545.4	21.083		
129.00	129.00	Zero Out: Stream #2	8.2	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2	0.0	27.0	16.333		

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: [EV0233UF.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 |
 +-------------------+--------------------------------+----------------------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     545.4       548.9|
21.083 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      27.0         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|     548.9       548.6|
21.167 |             |           |
 |   133.00     133.00| View:                 Stream #1|                 548.6|
21.167 |       675.71|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 134C                              *
* 2-YR EV JUNE 2019 ROKAMOTO                                           *
 **************************************************************************

  FILE NAME: EV0234CF.DAT
  TIME/DATE OF STUDY: 06:35 06/12/2019


                       ** 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12603.00 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 =    0.141 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


**************************************************************************
  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    126.00 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.299 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.292; LOW LOSS FRACTION = 0.536
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.276; LOW LOSS FRACTION = 0.517
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.380 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.251; LOW LOSS FRACTION = 0.478
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.486; LOW LOSS FRACTION = 0.820
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.541 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.592; LOW LOSS FRACTION = 0.985
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.434; LOW LOSS FRACTION = 0.737
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.256 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.553; LOW LOSS FRACTION = 0.923
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.274 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.253; LOW LOSS FRACTION = 0.494
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    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 =  0.28;  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  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 =    1715.900 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 = 0.750
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.391 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.487; LOW LOSS FRACTION = 0.818
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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 =    2.983 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 =  0.28;  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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: [EV0234CF.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       504.7|
20.417 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|     504.7       503.5|
20.500 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        17.1|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|     503.5       505.6|
20.500 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      17.1         0.0|
|            |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|     505.6       504.7|
20.583 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        16.9|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     504.7       507.3|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      16.9         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         0.8|
16.417 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     507.3       507.5|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       0.8         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|     507.5       506.8|
20.750 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        31.9|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        15.4|
16.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      31.9        45.8|
16.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      15.4         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|     506.8       513.7|
20.750 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      45.8         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|     513.7       513.5|
20.833 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0        70.6|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0         6.3|
16.583 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|      70.6        76.3|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|       6.3         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|     513.5       526.6|
20.833 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|      76.3         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|     526.6       526.4|
20.833 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0         2.6|
16.583 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|     526.4       526.9|
20.833 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|       2.6         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|     526.9       526.6|
20.917 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0        57.0|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|      57.0        56.4|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|     526.6       536.6|
20.917 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|      56.4         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|     536.6       536.4|
21.083 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0         7.6|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     536.4       537.5|
21.083 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|       7.6         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        24.8|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |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: [EV0234CF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     537.5       541.0|
21.000 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      24.8         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|     541.0       540.8|
21.167 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       131.5|
17.333 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     131.5       130.1|
17.917 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     130.1       129.6|
18.250 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0        70.3|
17.000 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     129.6       189.8|
17.167 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|      70.3         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|     540.8       699.0|
17.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     189.8         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|     699.0       698.2|
17.833 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0        60.7|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|     698.2       737.8|
17.250 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|      60.7         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0        48.1|
18.000 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|     737.8       781.9|
17.250 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|      48.1         0.0|
|             |           |
 |   134.00     134.00| View:                 Stream #1|                 781.9|
17.250 |       886.90|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 134U                               *
* 2-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0234UF.DAT
  TIME/DATE OF STUDY: 06:36 06/12/2019


                        ** 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 = 0.304; 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  12603.00 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 =    0.141 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 = 0.304; 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    126.00 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 = 0.304; 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 =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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 = 0.304; 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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.299 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.292; LOW LOSS FRACTION = 0.536
  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 = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936


********************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.276; LOW LOSS FRACTION = 0.517
  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 = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936


********************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.380 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.251; LOW LOSS FRACTION = 0.478
  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 = 0.304; 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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.486; LOW LOSS FRACTION = 0.820
  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 = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.541 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.592; LOW LOSS FRACTION = 0.985
  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 = 0.304; 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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.434; LOW LOSS FRACTION = 0.737
  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 = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.256 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.553; LOW LOSS FRACTION = 0.923
  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 = 0.304; 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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.274 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.253; LOW LOSS FRACTION = 0.494
  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 = 0.304; 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    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 =  0.28;  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 = 0.304; 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  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 =    1715.900 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 = 0.750
  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 = 0.304; 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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.391 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.487; LOW LOSS FRACTION = 0.818
  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 = 0.304; 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: [EV0234UF.DAT]

Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS		UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1		0.0	507.5	20.417		
119.00	12603.00	Convex Routing:	Stream #1	507.5	506.1	20.500		
810.00	12603.00	Subarea (UH) Added to Stream #2		0.0	17.5	16.167		
12603.00	12603.00	Stream #2 Added to:	Stream #1	506.1	508.2	20.500		
12603.00	12603.00	Zero Out:	Stream #2	17.5	0.0			
12603.00	126.00	Convex Routing:	Stream #1	508.2	507.3	20.583		
920.00	126.00	Subarea (UH) Added to Stream #2		0.0	17.3	16.333		
126.00	126.00	Stream #2 Added to:	Stream #1	507.3	509.9	20.583		
126.00	126.00	Zero Out:	Stream #2	17.3	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2		0.0	0.8	16.417		
126.00	126.00	Stream #2 Added to:	Stream #1	509.9	510.0	20.583		
126.00	126.00	Zero Out:	Stream #2	0.8	0.0			
126.00	12720.50	Convex Routing:	Stream #1	510.0	509.4	20.750		
430.00	12720.50	Subarea (UH) Added to Stream #2		0.0	32.6	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3		0.0	15.7	16.250		
12720.50	12720.50	Stream #3 Added to:	Stream #2	32.6	46.8	16.333		
12720.50	12720.50	Zero Out:	Stream #3	15.7	0.0			
12720.50	12720.50	Stream #2 Added to:	Stream #1	509.4	516.3	20.750		
12720.50	12720.50	Zero Out:	Stream #2	46.8	0.0			

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|     516.3       516.0|
20.833 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0        72.1|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0         6.4|
16.583 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|      72.1        77.9|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|       6.4         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|     516.0       529.1|
20.833 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|      77.9         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|     529.1       528.9|
20.833 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0         2.6|
16.583 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|     528.9       529.4|
20.833 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|       2.6         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|     529.4       529.1|
20.917 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0        58.2|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|      58.2        57.6|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|     529.1       539.1|
20.917 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|      57.6         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|     539.1       538.9|
21.083 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0         7.7|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     538.9       539.9|
21.083 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|       7.7         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        25.4|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |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: [EV0234UF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     539.9       543.4|
21.083 |            |           |
 |   129.00     129.00| Zero Out:             Stream #2|      25.4         0.0|
|            |           |
 |   129.00     133.00| Convex Routing:       Stream #1|     543.4       543.3|
21.167 |            |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       133.5|
17.333 |            |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     133.5       132.0|
17.917 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     132.0       131.5|
18.250 |            |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0        71.5|
17.000 |            |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     131.5       192.3|
17.167 |            |           |
 |   133.00     133.00| Zero Out:             Stream #3|      71.5         0.0|
|            |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|     543.3       703.0|
17.583 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     192.3         0.0|
|            |           |
 |   133.00     134.00| Convex Routing:       Stream #1|     703.0       702.1|
17.833 |            |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0        62.0|
16.417 |            |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|     702.1       744.2|
17.167 |            |           |
 |   134.00     134.00| Zero Out:             Stream #2|      62.0         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   134.00     134.00| View:                 Stream #1|                 744.2|
17.167 |       849.17|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 137                               *
* 2-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV02137F.DAT
  TIME/DATE OF STUDY: 06:35 06/12/2019


                        ** 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 = 0.291; 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  12603.00 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 =    0.141 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 = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933


**************************************************************************
  FLOW PROCESS FROM NODE  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    126.00 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 = 0.291; 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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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 = 0.291; 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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.299 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.292; LOW LOSS FRACTION = 0.536
  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 = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 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) =  0.276; LOW LOSS FRACTION = 0.517
  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 = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.380 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.251; LOW LOSS FRACTION = 0.478
  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 = 0.291; 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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.486; LOW LOSS FRACTION = 0.820
  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 = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.541 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.592; LOW LOSS FRACTION = 0.985
  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 = 0.291; 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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.434; LOW LOSS FRACTION = 0.737
  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 = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.256 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.553; LOW LOSS FRACTION = 0.923
  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 = 0.291; 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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.274 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.253; LOW LOSS FRACTION = 0.494
  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 = 0.291; 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    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 =  0.28;  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 = 0.291; 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  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 =    1715.900 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 = 0.750
  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 = 0.291; 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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.391 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.487; LOW LOSS FRACTION = 0.818
  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 = 0.291; 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 =    2.983 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 =  0.28;  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 = 0.291; 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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.533 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.474; LOW LOSS FRACTION = 0.781
  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 = 0.291; 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: [EV02137F.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       503.8|
20.417 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|     503.8       502.6|
20.500 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        17.0|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|     502.6       504.7|
20.500 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      17.0         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|     504.7       503.9|
20.583 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        16.8|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     503.9       506.5|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      16.8         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         0.8|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     506.5       506.6|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       0.8         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|     506.6       506.0|
20.750 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        31.7|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        15.3|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      31.7        45.5|
16.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      15.3         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|     506.0       512.9|
20.750 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      45.5         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|     512.9       512.7|
20.833 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0        70.2|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0         6.2|
16.583 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|      70.2        75.9|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|       6.2         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|     512.7       525.8|
20.833 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|      75.9         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|     525.8       525.6|
20.833 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0         2.5|
16.583 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|     525.6       526.1|
20.833 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|       2.5         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|     526.1       525.9|
20.917 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0        56.6|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|      56.6        56.0|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|     525.9       535.9|
20.917 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|      56.0         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|     535.9       535.6|
21.083 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0         7.5|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     535.6       536.7|
21.000 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|       7.5         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        24.6|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                  |
 +-------------------------------------------------------------------------------
-------------------------------------+
```

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS		UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO MAX. STORAGE PEAK (HR)	MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to:	Stream #1	536.7	540.2	21.000		
129.00	129.00	Zero Out:	Stream #2	24.6	0.0			
129.00	133.00	Convex Routing:	Stream #1	540.2	540.1	21.167		
13010.00	132.00	Subarea (UH) Added to	Stream #2	0.0	130.9	17.333		
132.00	13305.00	Convex Routing:	Stream #2	130.9	129.5	17.917		
13305.00	133.00	Convex Routing:	Stream #2	129.5	129.0	18.250		
132.00	133.00	Subarea (UH) Added to	Stream #3	0.0	69.9	17.000		
133.00	133.00	Stream #3 Added to:	Stream #2	129.0	189.1	17.167		
133.00	133.00	Zero Out:	Stream #3	69.9	0.0			
133.00	133.00	Stream #2 Added to:	Stream #1	540.1	697.7	17.583		
133.00	133.00	Zero Out:	Stream #2	189.1	0.0			
133.00	134.00	Convex Routing:	Stream #1	697.7	696.9	17.833		
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	60.4	16.417		
134.00	134.00	Stream #2 Added to:	Stream #1	696.9	735.8	17.250		
134.00	134.00	Zero Out:	Stream #2	60.4	0.0			
13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	47.9	18.000		
134.00	134.00	Stream #2 Added to:	Stream #1	735.8	779.9	17.250		
134.00	134.00	Zero Out:	Stream #2	47.9	0.0			
134.00	137.00	Convex Routing:	Stream #1	779.9	777.9	17.500		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0        47.0|
16.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|     777.9       814.3|
17.417 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|      47.0         0.0|
|             |           |
 |   137.00     137.00| View:                 Stream #1|                814.3|
17.417 |       915.40|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 138                               *
* 2-YR EV JUNE 2019 ROKAMOTO                                           *
 **************************************************************************

  FILE NAME: EV02138F.DAT
  TIME/DATE OF STUDY: 06:34 06/12/2019


                        ** 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 = 0.287; 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  12603.00 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 =    0.141 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 = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932


**************************************************************************
  FLOW PROCESS FROM NODE  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    126.00 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 = 0.287; 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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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 = 0.287; 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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.299 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.292; LOW LOSS FRACTION = 0.536
  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 = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 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) =  0.276; LOW LOSS FRACTION = 0.517
  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 = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.380 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.251; LOW LOSS FRACTION = 0.478
  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 = 0.287; 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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.486; LOW LOSS FRACTION = 0.820
  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 = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.541 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.592; LOW LOSS FRACTION = 0.985
  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 = 0.287; 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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.434; LOW LOSS FRACTION = 0.737
  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 = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.256 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.553; LOW LOSS FRACTION = 0.923
  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 = 0.287; 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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.274 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.253; LOW LOSS FRACTION = 0.494
  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 = 0.287; 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    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 =  0.28;  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 = 0.287; 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  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 =    1715.900 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 = 0.750
  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 = 0.287; 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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.391 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.487; LOW LOSS FRACTION = 0.818
  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 = 0.287; 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 =    2.983 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 =  0.28;  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 = 0.287; 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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.533 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.474; LOW LOSS FRACTION = 0.781
  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 = 0.287; 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) =     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 =    0.923 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 =  0.28;  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 = 0.287; 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: [EV02138F.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       502.9|
20.417 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|     502.9       501.7|
20.500 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        16.9|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|     501.7       503.8|
20.500 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      16.9         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|     503.8       503.0|
20.583 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        16.7|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     503.0       505.6|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      16.7         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         0.8|
16.417 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     505.6       505.8|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       0.8         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|     505.8       505.2|
20.750 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        31.5|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        15.2|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      31.5        45.2|
16.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      15.2         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|     505.2       512.1|
20.750 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      45.2         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|     512.1       511.9|
20.833 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0        69.7|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0         6.2|
16.583 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|      69.7        75.4|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|       6.2         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|     511.9       524.9|
20.833 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|      75.4         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|     524.9       524.8|
20.833 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0         2.5|
16.583 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|     524.8       525.3|
20.833 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|       2.5         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|     525.3       525.1|
20.917 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0        56.3|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|      56.3        55.7|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|     525.1       535.1|
20.917 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|      55.7         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|     535.1       534.9|
21.000 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0         7.5|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     534.9       535.9|
21.000 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|       7.5         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        24.4|
16.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |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: [EV02138F.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     535.9       539.4|
21.000 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      24.4         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|     539.4       539.3|
21.167 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       130.2|
17.333 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     130.2       128.9|
17.917 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     128.9       128.4|
18.250 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0        69.5|
17.000 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     128.4       188.2|
17.167 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|      69.5         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|     539.3       696.5|
17.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     188.2         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|     696.5       695.7|
17.833 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0        60.0|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|     695.7       733.9|
17.250 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|      60.0         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0        47.8|
18.000 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|     733.9       777.9|
17.250 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|      47.8         0.0|
|             |           |
 |   134.00     137.00| Convex Routing:       Stream #1|     777.9       775.9|
17.500 |             |           |
```



```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0        46.7|
16.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|     775.9       812.2|
17.417 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|      46.7         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|     812.2       809.6|
17.667 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0        29.4|
17.000 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|     809.6       835.8|
17.667 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|      29.4         0.0|
|             |           |
 |   138.00     138.00| View:                 Stream #1|                  835.8|
17.667 |       934.91|     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
```

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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              Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                          Analysis prepared by:

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 139                                 *
* 2-YR EV JUNE 2019 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV02139F.DAT
  TIME/DATE OF STUDY: 06:34 06/12/2019


                        ** 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 = 0.286; 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  12603.00 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 =    0.141 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 = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932


******************************************************************************
  FLOW PROCESS FROM NODE  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    126.00 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 = 0.286; 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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.323 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.587; LOW LOSS FRACTION = 0.979
  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 = 0.286; 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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.299 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.292; LOW LOSS FRACTION = 0.536
  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 = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932


********************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.276; LOW LOSS FRACTION = 0.517
  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 = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932


********************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.380 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.251; LOW LOSS FRACTION = 0.478
  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 = 0.286; 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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.486; LOW LOSS FRACTION = 0.820
  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 = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.541 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.592; LOW LOSS FRACTION = 0.985
  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 = 0.286; 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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.434; LOW LOSS FRACTION = 0.737
  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 = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932


********************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.256 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.553; LOW LOSS FRACTION = 0.923
  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 = 0.286; 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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.274 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.253; LOW LOSS FRACTION = 0.494
  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 = 0.286; 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    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 =  0.28;  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 = 0.286; 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  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 =    1715.900 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 = 0.750
  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 = 0.286; 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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.391 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.487; LOW LOSS FRACTION = 0.818
  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 = 0.286; 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 =    2.983 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 =  0.28;  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 = 0.286; 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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.533 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.474; LOW LOSS FRACTION = 0.781
  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 = 0.286; 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) =     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 =    0.923 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 =  0.28;  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 = 0.286; 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 =    0.288 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 =  0.28;  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 = 0.286; 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: [EV02139F.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       502.7|
20.417 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|     502.7       501.5|
20.500 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        16.8|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|     501.5       503.6|
20.500 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      16.8         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|     503.6       502.8|
20.583 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        16.6|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     502.8       505.4|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      16.6         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         0.8|
16.417 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|     505.4       505.6|
20.583 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       0.8         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|     505.6       504.9|
20.750 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        31.5|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        15.1|
16.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      31.5        45.0|
16.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      15.1         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|     504.9       511.8|
20.750 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      45.0         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|     511.8       511.7|
20.833 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0        69.6|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0         6.2|
16.583 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|      69.6        75.2|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|       6.2         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|     511.7       524.7|
20.833 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|      75.2         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|     524.7       524.6|
20.833 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0         2.5|
16.583 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|     524.6       525.1|
20.833 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|       2.5         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|     525.1       524.9|
20.917 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0        56.1|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|      56.1        55.6|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|     524.9       534.8|
20.917 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|      55.6         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|     534.8       534.6|
21.000 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0         7.4|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|     534.6       535.7|
21.000 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|       7.4         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        24.4|
16.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                  |
 +-------------------------------------------------------------------------------
-------------------------------------+
```

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	535.7	539.2	21.000		
129.00	129.00	Zero Out: Stream #2	24.4	0.0			
129.00	133.00	Convex Routing: Stream #1	539.2	539.1	21.167		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	130.0	17.333		
132.00	13305.00	Convex Routing: Stream #2	130.0	128.7	17.917		
13305.00	133.00	Convex Routing: Stream #2	128.7	128.2	18.250		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	69.4	17.000		
133.00	133.00	Stream #3 Added to: Stream #2	128.2	188.0	17.167		
133.00	133.00	Zero Out: Stream #3	69.4	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	539.1	696.1	17.583		
133.00	133.00	Zero Out: Stream #2	188.0	0.0			
133.00	134.00	Convex Routing: Stream #1	696.1	695.3	17.833		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	59.8	16.417		
134.00	134.00	Stream #2 Added to: Stream #1	695.3	733.3	17.250		
134.00	134.00	Zero Out: Stream #2	59.8	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	47.8	18.000		
134.00	134.00	Stream #2 Added to: Stream #1	733.3	777.3	17.250		
134.00	134.00	Zero Out: Stream #2	47.8	0.0			
134.00	137.00	Convex Routing: Stream #1	777.3	775.3	17.500		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0        46.6|
16.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|     775.3       811.5|
17.417 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|      46.6         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|     811.5       809.0|
17.667 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0        29.4|
17.000 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|     809.0       835.1|
17.667 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|      29.4         0.0|
|             |           |
 |   138.00     139.00| Convex Routing:       Stream #1|     835.1       834.4|
17.833 |             |           |
 |   138.00     139.00| Subarea (UH) Added to Stream #2|       0.0        31.0|
16.333 |             |           |
 |   139.00     139.00| Stream #2 Added to:   Stream #1|     834.4       848.7|
17.833 |             |           |
 |   139.00     139.00| Zero Out:             Stream #2|      31.0         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   139.00     139.00| View:                 Stream #1|                 848.7|
17.833 |       950.51|     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                        |
 +-----------------------------------------------------------------------------
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```

END OF FLOODSCx ROUTING ANALYSIS

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

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

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 119                                 *
* 5-YR EV APRIL 2019 FKAZI                                               *
 **************************************************************************

  FILE NAME: EV05119F.DAT
  TIME/DATE OF STUDY: 11:53 04/10/2019


                       ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.345; 30-MINUTE = 0.395;  1-HOUR = 0.435
    3-HOUR = 0.785;    6-HOUR = 0.904; 24-HOUR = 0.944


**************************************************************************
  FLOW PROCESS FROM NODE    119.00 TO NODE    119.00 IS CODE =  11
--------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
==========================================================================
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV05119F.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      2406.9|
19.333 |             |           |
 |   119.00     119.00| View:                  Stream #1|                2406.9|
19.333 |      1926.99|     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
```

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

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             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                          Analysis prepared by:

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 126                                 *
* 5-YR EV JUNE 2019 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV05126F.DAT
  TIME/DATE OF STUDY: 14:01 06/06/2019


                        ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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: [EV05126F.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      2391.2|
19.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    2391.2      2363.2|
19.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        41.5|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    2363.2      2367.2|
19.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      41.5         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    2367.2      2346.4|
19.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        65.4|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2346.4      2352.6|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      65.4         0.0|
|             |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        11.5|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2352.6      2353.1|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      11.5         0.0|
|             |           |
 |   126.00     126.00| View:                 Stream #1|                2353.1|
19.250 |      1953.63|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 127                                *
* 5-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV05127F.DAT
  TIME/DATE OF STUDY: 06:30 06/12/2019


                        ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


**************************************************************************
  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.271 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.472
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


********************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.230; LOW LOSS FRACTION = 0.459
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


********************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.351 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.209; LOW LOSS FRACTION = 0.415
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.433 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.405; LOW LOSS FRACTION = 0.770
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =    0.10     CHANNEL Z =  3.00
  UPSTREAM ELEVATION(FT) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.494; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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: [EV05127F.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      2352.4|
19.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    2352.4      2326.2|
19.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        40.2|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    2326.2      2330.2|
19.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      40.2         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    2330.2      2312.1|
19.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        62.6|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2312.1      2318.3|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      62.6         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|    2318.3      2318.8|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      10.7         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    2318.8      2314.8|
19.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        68.5|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        32.8|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      68.5        95.7|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      32.8         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    2314.8      2328.3|
19.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      95.7         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    2328.3      2326.0|
19.583 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       143.0|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        18.6|
16.500 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     143.0       160.3|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      18.6         0.0|
|            |          |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    2326.0      2352.0|
19.583 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     160.3         0.0|
|            |          |
 | 12741.00     127.00| Convex Routing:       Stream #1|    2352.0      2351.9|
19.583 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0        43.4|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    2351.9      2354.3|
19.583 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|      43.4         0.0|
|            |          |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00     127.00| View:                 Stream #1|                2354.3|
19.583 |      2064.24|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 133C                               *
* 5-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0533CF.DAT
  TIME/DATE OF STUDY: 06:29 06/12/2019


                        ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.271 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.472
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.230; LOW LOSS FRACTION = 0.459
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.351 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.209; LOW LOSS FRACTION = 0.415
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.433 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.405; LOW LOSS FRACTION = 0.770
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =    0.10     CHANNEL Z =  3.00
  UPSTREAM ELEVATION(FT) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.494; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.453 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.362; LOW LOSS FRACTION = 0.671
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.461; LOW LOSS FRACTION = 0.889
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.211; LOW LOSS FRACTION = 0.441
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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 =    1715.900 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) =  0.374; LOW LOSS FRACTION = 0.689
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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: [EV0533CF.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      2235.8|
19.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    2235.8      2214.7|
19.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        36.1|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    2214.7      2218.7|
19.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      36.1         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    2218.7      2208.8|
19.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        53.5|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2208.8      2215.1|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      53.5         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|    2215.1      2215.5|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       8.5         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    2215.5      2208.7|
19.417 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        62.8|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        29.9|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      62.8        87.8|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      29.9         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    2208.7      2222.6|
19.417 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      87.8         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    2222.6      2221.7|
19.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       132.5|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        16.5|
16.500 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     132.5       148.0|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      16.5         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    2221.7      2248.2|
19.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     148.0         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    2248.2      2247.9|
19.500 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0        34.4|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    2247.9      2250.3|
19.500 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|      34.4         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    2250.3      2249.3|
19.583 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       120.5|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     120.5       119.1|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    2249.3      2272.0|
19.583 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     119.1         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    2272.0      2270.2|
19.667 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0        32.3|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2270.2      2272.8|
19.667 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      32.3         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        46.7|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV0533CF.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 |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2272.8      2282.3|
18.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      46.7         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    2282.3      2279.7|
18.500 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       301.0|
17.000 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     301.0       293.4|
17.500 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     293.4       291.8|
17.833 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       154.2|
16.750 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     291.8       397.6|
17.667 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     154.2         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|    2279.7      2597.2|
18.417 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     397.6         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                2597.2|
18.417 |      2388.18|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133T                              *
* 5-YR EV APRIL 2019 FKAZI                                             *
 **************************************************************************

  FILE NAME: EV0533TF.DAT
  TIME/DATE OF STUDY: 11:49 04/10/2019


                       ** 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 =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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 = 0.986


**************************************************************************
  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 =    1715.900 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) =  0.374; LOW LOSS FRACTION = 0.689
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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 = 0.986


**************************************************************************
  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: [EV0533TF.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 |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       777.4|
17.000 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     777.4       736.8|
17.333 |             |           |
 | 13305.00     133.00| Convex Routing:       Stream #2|     736.8       724.1|
17.583 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       391.4|
16.750 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     724.1       857.6|
17.583 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #3|     391.4         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|       0.0       857.6|
17.583 |             |           |
 |   133.00     133.00| Zero Out:             Stream #2|     857.6         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                 857.6|
17.583 |       315.00|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133U                              *
* 5-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV0533UF.DAT
  TIME/DATE OF STUDY: 06:30 06/12/2019


                        ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.271 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.472
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.230; LOW LOSS FRACTION = 0.459
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.351 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.209; LOW LOSS FRACTION = 0.415
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.433 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.405; LOW LOSS FRACTION = 0.770
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =    0.10     CHANNEL Z =  3.00
  UPSTREAM ELEVATION(FT) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.494; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.453 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.362; LOW LOSS FRACTION = 0.671
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.461; LOW LOSS FRACTION = 0.889
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.211; LOW LOSS FRACTION = 0.441
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    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: [EV0533UF.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      2326.5|
19.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    2326.5      2301.5|
19.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        39.3|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    2301.5      2305.5|
19.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      39.3         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    2305.5      2289.2|
19.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        60.6|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2289.2      2295.4|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      60.6         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        10.2|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2295.4      2295.9|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      10.2         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    2295.9      2291.2|
19.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        67.3|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        32.2|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      67.3        94.0|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      32.2         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    2291.2      2304.8|
19.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      94.0         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    2304.8      2302.6|
19.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       140.7|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        18.2|
16.500 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     140.7       157.7|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      18.2         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    2302.6      2328.6|
19.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     157.7         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    2328.6      2328.6|
19.583 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0        41.4|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    2328.6      2331.0|
19.583 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|      41.4         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    2331.0      2329.9|
19.667 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       130.2|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     130.2       128.5|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    2329.9      2352.2|
19.667 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     128.5         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    2352.2      2350.0|
19.750 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0        37.8|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2350.0      2352.6|
19.750 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      37.8         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        49.9|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV0533UF.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 |
 +-------------------+--------------------------------+----------------------+-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2352.6      2359.4|19.667 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      49.9         0.0|       |             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    2359.4      2357.0|19.750 |             |           |
 |   133.00     133.00| View:                 Stream #1|                2357.0|19.750 |      2147.66|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 134C                              *
* 5-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV0534CF.DAT
  TIME/DATE OF STUDY: 06:29 06/12/2019


                        ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


**************************************************************************
  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.271 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.472
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.230; LOW LOSS FRACTION = 0.459
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.351 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.209; LOW LOSS FRACTION = 0.415
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.433 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.405; LOW LOSS FRACTION = 0.770
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =    0.10     CHANNEL Z =  3.00
  UPSTREAM ELEVATION(FT) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.494; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.453 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.362; LOW LOSS FRACTION = 0.671
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     420.000 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) =  0.461; LOW LOSS FRACTION = 0.889
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    129.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     214.700 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) =  0.211; LOW LOSS FRACTION = 0.441
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  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 =    1715.900 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) =  0.374; LOW LOSS FRACTION = 0.689
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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) =     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 =    1691.600 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) =  0.406; LOW LOSS FRACTION = 0.767
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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 =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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: [EV0534CF.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      2166.1|
19.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    2166.1      2148.0|
19.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        33.7|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    2148.0      2152.2|
18.833 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      33.7         0.0|
|            |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    2152.2      2147.8|
19.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        48.3|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2147.8      2154.0|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      48.3         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         7.1|
16.417 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2154.0      2154.4|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       7.1         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    2154.4      2147.9|
19.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        59.6|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        28.3|
16.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      59.6        83.6|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      28.3         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    2147.9      2162.1|
19.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      83.6         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    2162.1      2160.4|
19.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       126.6|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        15.3|
16.500 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     126.6       141.1|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      15.3         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    2160.4      2186.8|
19.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     141.1         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    2186.8      2186.8|
19.500 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0        29.2|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    2186.8      2189.2|
19.500 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|      29.2         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    2189.2      2188.4|
19.583 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       113.4|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     113.4       112.2|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    2188.4      2230.4|
18.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     112.2         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    2230.4      2227.7|
18.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0        28.3|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2227.7      2231.5|
18.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      28.3         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        44.4|
16.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |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: [EV0534CF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2231.5      2242.0|
18.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      44.4         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    2242.0      2239.5|
18.500 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       284.9|
17.000 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     284.9       278.6|
17.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     278.6       277.3|
17.833 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       146.2|
16.750 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     277.3       381.9|
17.667 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     146.2         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|    2239.5      2552.6|
18.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     381.9         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|    2552.6      2551.0|
18.583 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       145.9|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    2551.0      2587.1|
18.333 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     145.9         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0       138.2|
18.083 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    2587.1      2724.3|
18.250 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     138.2         0.0|
|             |           |
 |   134.00     134.00| View:                 Stream #1|                2724.3|
18.250 |      2534.48|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 134U                               *
* 5-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0534UF.DAT
  TIME/DATE OF STUDY: 06:29 06/12/2019


                        ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.271 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.472
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.230; LOW LOSS FRACTION = 0.459
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.351 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.209; LOW LOSS FRACTION = 0.415
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.433 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.405; LOW LOSS FRACTION = 0.770
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =    0.10     CHANNEL Z =  3.00
  UPSTREAM ELEVATION(FT) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.494; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.453 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.362; LOW LOSS FRACTION = 0.671
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.461; LOW LOSS FRACTION = 0.889
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.211; LOW LOSS FRACTION = 0.441
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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 =    1715.900 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) =  0.374; LOW LOSS FRACTION = 0.689
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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,
  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) =     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 =    1691.600 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) =  0.406; LOW LOSS FRACTION = 0.767
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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<<<<<

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

|INPUT FILENAME: [EV0534UF.DAT]

Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	2214.0	19.333	
119.00	12603.00	Convex Routing: Stream #1	2214.0	2193.8	19.417	
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	35.3	16.167	
12603.00	12603.00	Stream #2 Added to: Stream #1	2193.8	2197.8	19.417	
12603.00	12603.00	Zero Out: Stream #2	35.3	0.0		
12603.00	126.00	Convex Routing: Stream #1	2197.8	2189.6	19.250	
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	51.8	16.333	
126.00	126.00	Stream #2 Added to: Stream #1	2189.6	2195.8	19.250	
126.00	126.00	Zero Out: Stream #2	51.8	0.0		
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	8.0	16.417	
126.00	126.00	Stream #2 Added to: Stream #1	2195.8	2196.3	19.250	
126.00	126.00	Zero Out: Stream #2	8.0	0.0		
126.00	12720.50	Convex Routing: Stream #1	2196.3	2189.4	19.417	
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	61.7	16.333	
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	29.4	16.250	
12720.50	12720.50	Stream #3 Added to: Stream #2	61.7	86.3	16.250	
12720.50	12720.50	Zero Out: Stream #3	29.4	0.0		
12720.50	12720.50	Stream #2 Added to: Stream #1	2189.4	2203.4	19.417	
12720.50	12720.50	Zero Out: Stream #2	86.3	0.0		

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    2203.4      2202.5|
19.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       130.5|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        16.1|
16.500 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     130.5       145.6|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      16.1         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    2202.5      2228.9|
19.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     145.6         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    2228.9      2228.7|
19.500 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0        32.7|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    2228.7      2231.1|
19.500 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|      32.7         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    2231.1      2230.1|
19.583 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       118.2|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     118.2       116.8|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    2230.1      2258.4|
18.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     116.8         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    2258.4      2255.5|
18.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0        31.0|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2255.5      2259.3|
18.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      31.0         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        45.9|
16.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |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: [EV0534UF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2259.3      2269.7|
18.417 |            |           |
 |   129.00     129.00| Zero Out:             Stream #2|      45.9         0.0|
|            |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    2269.7      2267.2|
18.500 |            |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       295.9|
17.000 |            |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     295.9       288.6|
17.500 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     288.6       287.1|
17.833 |            |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       151.6|
16.750 |            |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     287.1       392.4|
17.667 |            |           |
 |   133.00     133.00| Zero Out:             Stream #3|     151.6         0.0|
|            |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|    2267.2      2583.6|
18.417 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     392.4         0.0|
|            |           |
 |   133.00     134.00| Convex Routing:       Stream #1|    2583.6      2581.7|
18.583 |            |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       154.2|
16.417 |            |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    2581.7      2615.9|
18.333 |            |           |
 |   134.00     134.00| Zero Out:             Stream #2|     154.2         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   134.00     134.00| View:                 Stream #1|                2615.9|
18.333 |      2448.07|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 137                                *
* 5-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV05137F.DAT
  TIME/DATE OF STUDY: 06:28 06/12/2019


                        ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.271 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.472
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.230; LOW LOSS FRACTION = 0.459
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
**************************************************************************
 FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========================================================================
 THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
 ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
 (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) =     247.00
 CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
 CONSTANT LOSS RATE(CFS) =    0.00
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
==========================================================================
 WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.351 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.209; LOW LOSS FRACTION = 0.415
 SPECIFIED PEAK RAINFALL DEPTHS(INCH):
 5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
   3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
 *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  12741.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
==========================================================================
 WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.433 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.405; LOW LOSS FRACTION = 0.770
 SPECIFIED PEAK RAINFALL DEPTHS(INCH):
 5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
   3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
 *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  12741.00 TO NODE  12741.00 IS CODE =   7
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 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) =    0.10     CHANNEL Z =  3.00
 UPSTREAM ELEVATION(FT) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
 CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.494; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.453 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.362; LOW LOSS FRACTION = 0.671
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.461; LOW LOSS FRACTION = 0.889
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.211; LOW LOSS FRACTION = 0.441
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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 =    1715.900 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) =  0.374; LOW LOSS FRACTION = 0.689
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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,
  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) =     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 =    1691.600 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) =  0.406; LOW LOSS FRACTION = 0.767
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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 =    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    0.01     CHANNEL Z =  3.00
  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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.438 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.395; LOW LOSS FRACTION = 0.716
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
```



```
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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: [EV05137F.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      2151.5|
19.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    2151.5      2135.2|
18.833 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        33.3|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    2135.2      2139.7|
18.833 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      33.3         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    2139.7      2135.2|
19.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        47.3|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2135.2      2141.4|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      47.3         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         6.9|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2141.4      2141.9|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       6.9         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    2141.9      2135.5|
19.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        59.0|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        28.0|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      59.0        82.8|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      28.0         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    2135.5      2149.6|
19.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      82.8         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    2149.6      2147.7|
19.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       125.5|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        15.1|
16.500 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     125.5       139.8|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      15.1         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    2147.7      2174.3|
19.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     139.8         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    2174.3      2174.2|
19.500 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0        28.1|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    2174.2      2176.6|
19.500 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|      28.1         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    2176.6      2175.7|
19.583 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       112.1|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     112.1       110.8|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    2175.7      2221.9|
18.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     110.8         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    2221.9      2219.2|
18.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0        27.5|
16.333 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2219.2      2223.0|
18.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      27.5         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        43.9|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                  |
 +-------------------------------------------------------------------------------
-------------------------------------+
```

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	2223.0	2233.4	18.417		
129.00	129.00	Zero Out: Stream #2	43.9	0.0			
129.00	133.00	Convex Routing: Stream #1	2233.4	2231.0	18.500		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	281.7	17.000		
132.00	13305.00	Convex Routing: Stream #2	281.7	275.6	17.583		
13305.00	133.00	Convex Routing: Stream #2	275.6	274.3	17.833		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	144.7	16.750		
133.00	133.00	Stream #3 Added to: Stream #2	274.3	378.6	17.667		
133.00	133.00	Zero Out: Stream #3	144.7	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	2231.0	2543.1	18.417		
133.00	133.00	Zero Out: Stream #2	378.6	0.0			
133.00	134.00	Convex Routing: Stream #1	2543.1	2541.6	18.583		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	143.5	16.417		
134.00	134.00	Stream #2 Added to: Stream #1	2541.6	2578.2	18.333		
134.00	134.00	Zero Out: Stream #2	143.5	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	137.0	18.083		
134.00	134.00	Stream #2 Added to: Stream #1	2578.2	2714.2	18.250		
134.00	134.00	Zero Out: Stream #2	137.0	0.0			
134.00	137.00	Convex Routing: Stream #1	2714.2	2711.6	18.417		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       104.9|
16.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|    2711.6      2751.7|
18.333 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     104.9         0.0|
|             |           |
 |   137.00     137.00| View:                 Stream #1|                2751.7|
18.333 |      2585.75|     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

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

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

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 138                                *
* 5-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV05138F.DAT
  TIME/DATE OF STUDY: 06:27 06/12/2019


                        ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.271 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.472
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.230; LOW LOSS FRACTION = 0.459
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.351 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.209; LOW LOSS FRACTION = 0.415
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.433 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.405; LOW LOSS FRACTION = 0.770
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =    0.10     CHANNEL Z =  3.00
  UPSTREAM ELEVATION(FT) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.494; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.453 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.362; LOW LOSS FRACTION = 0.671
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.461; LOW LOSS FRACTION = 0.889
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.211; LOW LOSS FRACTION = 0.441
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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 =    1715.900 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) =  0.374; LOW LOSS FRACTION = 0.689
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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,
  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) =     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 =    1691.600 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) =  0.406; LOW LOSS FRACTION = 0.767
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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 =    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    0.01     CHANNEL Z =  3.00
  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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.438 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.395; LOW LOSS FRACTION = 0.716
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
```



```
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    0.01     CHANNEL Z =  3.00
  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 =    0.607 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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: [EV05138F.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      2135.9|
19.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    2135.9      2121.8|
18.833 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        32.8|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    2121.8      2126.3|
18.833 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      32.8         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    2126.3      2121.6|
19.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        46.2|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2121.6      2127.8|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      46.2         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         6.6|
16.417 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2127.8      2128.3|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       6.6         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    2128.3      2122.1|
19.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        58.4|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        27.6|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      58.4        82.0|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      27.6         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    2122.1      2136.2|
19.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      82.0         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    2136.2      2134.1|
19.500 |             |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       124.3|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        14.8|
16.500 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     124.3       138.3|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      14.8         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    2134.1      2162.4|
18.583 |             |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     138.3         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    2162.4      2161.1|
18.583 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0        27.0|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    2161.1      2164.8|
18.583 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|      27.0         0.0|
|            |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    2164.8      2163.1|
18.667 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       110.6|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     110.6       109.4|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    2163.1      2212.8|
18.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     109.4         0.0|
|            |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    2212.8      2210.2|
18.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0        26.6|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2210.2      2213.9|
18.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      26.6         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        43.5|
16.333 |             |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 |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                        |
 +-----------------------------------------------------------------------------
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```

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 +-------------------------------------------------------------------------------
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 |                                    * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV05138F.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 |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2213.9      2224.4|
18.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      43.5         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    2224.4      2222.1|
18.500 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       278.2|
17.000 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     278.2       272.5|
17.583 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     272.5       271.1|
17.833 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       143.0|
16.750 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     271.1       375.1|
17.667 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     143.0         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|    2222.1      2533.3|
18.417 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     375.1         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|    2533.3      2531.8|
18.583 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       140.9|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    2531.8      2569.1|
18.333 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     140.9         0.0|
|             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0       135.7|
18.083 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    2569.1      2703.9|
18.250 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     135.7         0.0|
|             |           |
 |   134.00     137.00| Convex Routing:       Stream #1|    2703.9      2701.3|
18.417 |             |           |
```



```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       103.3|
16.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|    2701.3      2741.8|
18.333 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     103.3         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|    2741.8      2739.5|
18.583 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0        75.5|
16.667 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|    2739.5      2772.7|
18.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|      75.5         0.0|
|             |           |
 |   138.00     138.00| View:                 Stream #1|                2772.7|
18.500 |      2624.43|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 139                               *
* 5-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV05139F.DAT
  TIME/DATE OF STUDY: 06:27 06/12/2019


                       ** 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 =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.02
  *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  12603.00 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 =    0.134 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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    126.00 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.314 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.490; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.271 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.472
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 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) =  0.230; LOW LOSS FRACTION = 0.459
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.351 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.209; LOW LOSS FRACTION = 0.415
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.433 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.405; LOW LOSS FRACTION = 0.770
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =    0.10     CHANNEL Z =  3.00
  UPSTREAM ELEVATION(FT) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.494; LOW LOSS FRACTION = 0.958
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.453 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.362; LOW LOSS FRACTION = 0.671
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  50347.00 TO NODE  12902.00 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) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.461; LOW LOSS FRACTION = 0.889
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.211; LOW LOSS FRACTION = 0.441
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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  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 =    1715.900 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) =  0.374; LOW LOSS FRACTION = 0.689
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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,
  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) =     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 =    1691.600 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) =  0.406; LOW LOSS FRACTION = 0.767
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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 =    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    0.01     CHANNEL Z =  3.00
  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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.438 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.395; LOW LOSS FRACTION = 0.716
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
```



```
  5-MINUTE =  0.18; 30-MINUTE =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    0.01     CHANNEL Z =  3.00
  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 =    0.607 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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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) =    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 =  0.41;  1-HOUR =  0.55
    3-HOUR =  0.92;    6-HOUR =  1.27; 24-HOUR =  2.12
  *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: [EV05139F.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      2131.1|
19.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    2131.1      2117.8|
18.833 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        32.6|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    2117.8      2122.3|
18.833 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      32.6         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    2122.3      2117.4|
19.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0        45.8|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2117.4      2123.6|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      45.8         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0         6.5|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    2123.6      2124.1|
19.250 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|       6.5         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    2124.1      2118.0|
19.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0        58.1|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        27.5|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|      58.1        81.6|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      27.5         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    2118.0      2132.1|
19.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|      81.6         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    2132.1      2130.0|
19.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       123.9|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        14.7|
16.500 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     123.9       137.9|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      14.7         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    2130.0      2159.1|
18.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     137.9         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    2159.1      2157.8|
18.583 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0        26.6|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    2157.8      2161.5|
18.583 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|      26.6         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    2161.5      2159.8|
18.667 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       110.1|
16.500 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     110.1       108.9|
16.583 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    2159.8      2210.1|
18.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     108.9         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    2210.1      2207.4|
18.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0        26.3|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    2207.4      2211.2|
18.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      26.3         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        43.3|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                  |
 +-------------------------------------------------------------------------------
-------------------------------------+
```

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	2211.2	2221.7	18.417		
129.00	129.00	Zero Out: Stream #2	43.3	0.0			
129.00	133.00	Convex Routing: Stream #1	2221.7	2219.3	18.500		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	277.1	17.000		
132.00	13305.00	Convex Routing: Stream #2	277.1	271.5	17.583		
13305.00	133.00	Convex Routing: Stream #2	271.5	270.1	17.833		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	142.4	16.750		
133.00	133.00	Stream #3 Added to: Stream #2	270.1	374.0	17.667		
133.00	133.00	Zero Out: Stream #3	142.4	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	2219.3	2530.3	18.417		
133.00	133.00	Zero Out: Stream #2	374.0	0.0			
133.00	134.00	Convex Routing: Stream #1	2530.3	2528.8	18.583		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	140.0	16.417		
134.00	134.00	Stream #2 Added to: Stream #1	2528.8	2566.3	18.333		
134.00	134.00	Zero Out: Stream #2	140.0	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	135.3	18.083		
134.00	134.00	Stream #2 Added to: Stream #1	2566.3	2700.8	18.250		
134.00	134.00	Zero Out: Stream #2	135.3	0.0			
134.00	137.00	Convex Routing: Stream #1	2700.8	2698.2	18.417		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       102.8|
16.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|    2698.2      2738.8|
18.333 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     102.8         0.0|
|            |           |
 |   137.00     138.00| Convex Routing:       Stream #1|    2738.8      2736.4|
18.583 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0        75.1|
16.667 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|    2736.4      2769.8|
18.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|      75.1         0.0|
|            |           |
 |   138.00     139.00| Convex Routing:       Stream #1|    2769.8      2769.0|
18.583 |             |           |
 |   138.00     139.00| Subarea (UH) Added to Stream #2|       0.0        59.4|
16.333 |             |           |
 |   139.00     139.00| Stream #2 Added to:   Stream #1|    2769.0      2781.5|
18.583 |             |           |
 |   139.00     139.00| Zero Out:             Stream #2|      59.4         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   139.00     139.00| View:                 Stream #1|                2781.5|
18.583 |      2650.67|     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

```
______________________________________________________________________________
******************************************************************************

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO FREE DRAINING UH                                  *
* ULTIMATE CONDITION - REGIONAL NODE 119                                 *
* 10-YR EV APRIL 2019 FKAZI                                              *
 ************************************************************************

  FILE NAME: EV10119F.DAT
  TIME/DATE OF STUDY: 09:42 04/10/2019


                       ** 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 = 0.345; 30-MINUTE = 0.395;  1-HOUR = 0.435
    3-HOUR = 0.785;    6-HOUR = 0.904; 24-HOUR = 0.944


******************************************************************************
  FLOW PROCESS FROM NODE    119.00 TO NODE    119.00 IS CODE =  11
------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
==============================================================================
==============================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV10119F.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      7195.7|
18.333 |             |           |
 |   119.00     119.00| View:                  Stream #1|                7195.7|
18.333 |      4873.32|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 126                               *
* 10-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV10126F.DAT
  TIME/DATE OF STUDY: 11:15 06/06/2019


                       ** 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  12603.00 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 =    0.128 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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: [EV10126F.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      7140.2|
18.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    7140.2      7119.4|
18.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        87.7|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    7119.4      7127.5|
18.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      87.7         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    7127.5      7107.5|
18.500 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       174.1|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    7107.5      7122.7|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     174.1         0.0|
|             |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        40.3|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    7122.7      7124.5|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      40.3         0.0|
|             |           |
 |   126.00     126.00| View:                 Stream #1|                7124.5|
18.500 |      4919.87|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 127                                *
* 10-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV10127F.DAT
  TIME/DATE OF STUDY: 06:22 06/12/2019


                       ** 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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  12603.00 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 =    0.128 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


**************************************************************************
  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    126.00 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 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) =  0.146; LOW LOSS FRACTION = 0.406
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.175 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.400
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.326 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.354
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.702
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.446 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.296; 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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: [EV10127F.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      7002.4|
18.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    7002.4      6983.4|
18.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        85.3|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    6983.4      6991.5|
18.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      85.3         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    6991.5      6972.9|
18.500 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       168.9|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6972.9      6988.0|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     168.9         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        38.9|
16.417 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6988.0      6989.8|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      38.9         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    6989.8      6957.8|
18.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       127.2|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        61.1|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     127.2       180.8|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      61.1         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    6957.8      6985.2|
18.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     180.8         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    6985.2      6968.2|
18.667 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       249.7|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        47.0|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     249.7       296.7|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      47.0         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    6968.2      7022.1|
18.667 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     296.7         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    7022.1      7013.6|
18.667 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       160.3|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    7013.6      7024.7|
18.667 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     160.3         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00     127.00| View:                 Stream #1|               7024.7|
18.667 |      5095.87|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 133C                               *
* 10-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV1033CF.DAT
  TIME/DATE OF STUDY: 06:22 06/12/2019


                        ** 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  12603.00 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 =    0.128 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
======================================================================
  WATERSHED AREA =     315.200 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) =  0.146; LOW LOSS FRACTION = 0.406
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
======================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.175 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.400
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
======================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.326 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.354
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.702
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.446 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.296; 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    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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.324 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.593
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.212 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.837
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.243 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.386
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.637 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.615
  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    133.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================
================================================================================
```

```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                    * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV1033CF.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      6564.8|
18.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    6564.8      6549.8|
18.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        77.7|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    6549.8      6557.9|
18.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      77.7         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    6557.9      6542.6|
18.500 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       152.5|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6542.6      6557.8|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     152.5         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        34.5|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6557.8      6559.6|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      34.5         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    6559.6      6524.4|
18.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       117.6|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        56.2|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     117.6       166.7|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      56.2         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    6524.4      6551.8|
18.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     166.7         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    6551.8      6537.9|
18.667 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       232.4|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        42.7|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     232.4       275.1|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      42.7         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    6537.9      6592.0|
18.667 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     275.1         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    6592.0      6582.6|
18.667 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       141.8|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    6582.6      6593.9|
18.667 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     141.8         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    6593.9      6583.2|
18.750 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       300.9|
16.417 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     300.9       295.8|
16.500 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    6583.2      6633.1|
18.750 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     295.8         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    6633.1      6623.4|
18.833 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       114.0|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6623.4      6630.0|
18.833 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     114.0         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        83.5|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV1033CF.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 |
 +-------------------+-------------------------------+----------------------+-
----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6630.0      6645.3|
18.167 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      83.5         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    6645.3      6641.8|
18.250 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       692.8|
17.000 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     692.8       663.1|
17.417 |             |           |
 +-------------------+-------------------------------+----------------------+-
----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     663.1       656.0|
17.833 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       329.1|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     656.0       832.7|
17.750 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     329.1         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|    6641.8      7429.9|
17.917 |             |           |
 +-------------------+-------------------------------+----------------------+-
----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     832.7         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                7429.9|
17.917 |      5635.36|     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
```

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

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            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133T                              *
* 10-YR EV APRIL 2019 FKAZI                                            *
 **************************************************************************

  FILE NAME: EV1033TF.DAT
  TIME/DATE OF STUDY: 09:38 04/10/2019


                       ** 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 = 0.986


**************************************************************************
  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.637 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.615
  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 = 0.986


**************************************************************************
  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: [EV1033TF.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 |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1730.6|
17.000 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1730.6      1656.9|
17.333 |             |           |
 | 13305.00     133.00| Convex Routing:       Stream #2|    1656.9      1627.2|
17.583 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       814.6|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1627.2      1870.6|
17.500 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #3|     814.6         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|       0.0      1870.6|
17.500 |             |           |
 |   133.00     133.00| Zero Out:             Stream #2|    1870.6         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                1870.6|
17.500 |       611.97|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133U                              *
* 10-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV1033UF.DAT
  TIME/DATE OF STUDY: 06:22 06/12/2019


                        ** 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
```



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


**************************************************************************
  FLOW PROCESS FROM NODE    810.00 TO NODE  12603.00 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 =    0.128 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  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    126.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
```

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================================================================================
  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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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<<<<<
============================================================================
```



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****************************************************************************
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 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) =  0.146; LOW LOSS FRACTION = 0.406
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.175 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.400
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.326 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.354
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.702
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.446 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.296; 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    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.324 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.593
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.212 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.837
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.243 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.386
  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    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<<<<<
================================================================================
================================================================================
```

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 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                    * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV1033UF.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      6905.1|
18.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    6905.1      6887.0|
18.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        83.7|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    6887.0      6895.1|
18.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      83.7         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    6895.1      6877.3|
18.500 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       165.3|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6877.3      6892.4|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     165.3         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        38.0|
16.417 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6892.4      6894.2|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      38.0         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    6894.2      6860.9|
18.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       125.1|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        60.0|
16.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     125.1       177.7|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      60.0         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    6860.9      6888.4|
18.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     177.7         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    6888.4      6872.2|
18.667 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       245.9|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        46.1|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     245.9       292.0|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      46.1         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    6872.2      6926.2|
18.667 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     292.0         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    6926.2      6917.5|
18.667 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       156.3|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    6917.5      6928.6|
18.667 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     156.3         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    6928.6      6918.4|
18.750 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       321.7|
16.417 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     321.7       313.7|
16.500 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    6918.4      6967.9|
18.750 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     313.7         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    6967.9      6956.4|
18.833 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       125.0|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6956.4      6963.0|
18.833 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     125.0         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        88.8|
16.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV1033UF.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 |
 +--------------------+--------------------------------+----------------------+-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6963.0      6975.8|18.833 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      88.8         0.0|       |             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    6975.8      6965.9|18.917 |             |           |
 |   133.00     133.00| View:                 Stream #1|                6965.9|18.917 |      5231.37|     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
```

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

              F L O O D    R O U T I N G    A N A L Y S I S
              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 1264

                          Analysis prepared by:

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


 ************************** DESCRIPTION OF STUDY **************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                 *
* ULTIMATE CONDITION - REGIONAL NODE 134C                                 *
* 10-YR EV JUNE 2019 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV1034CF.DAT
  TIME/DATE OF STUDY: 06:20 06/12/2019


                         ** 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12603.00 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 =    0.128 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


************************************************************************
  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    126.00 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 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) =  0.146; LOW LOSS FRACTION = 0.406
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.175 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.400
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.326 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.354
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.702
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.446 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.296; 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.324 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.593
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.212 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.837
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.243 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.386
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.637 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.615
 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
   3-HOUR = 0.740;    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) =  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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.338 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.699
 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
   3-HOUR = 0.740;    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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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: [EV1034CF.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      6305.9|
18.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    6305.9      6292.6|
18.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        73.6|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    6292.6      6300.7|
18.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      73.6         0.0|
|            |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    6300.7      6287.5|
18.500 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       143.4|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6287.5      6302.7|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     143.4         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        32.1|
16.417 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6302.7      6304.5|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      32.1         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    6304.5      6267.3|
18.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       112.3|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        53.5|
16.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     112.3       159.3|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      53.5         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    6267.3      6294.7|
18.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     159.3         0.0|
|            |           |
```

| 12720.50 | 12741.00 | Convex Routing: | Stream #1 | 6294.7 | 6282.5 | 18.667 | | |

| 320.00 | 12741.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 222.9 | 16.417 | | |

| 390.00 | 12741.00 | Subarea (UH) Added to Stream #4 | | 0.0 | 40.4 | 16.417 | | |

| 12741.00 | 12741.00 | Stream #4 Added to: | Stream #2 | 222.9 | 263.2 | 16.417 | | |

| 12741.00 | 12741.00 | Zero Out: | Stream #4 | 40.4 | 0.0 | | | |

| 12741.00 | 12741.00 | Stream #2 Added to: | Stream #1 | 6282.5 | 6336.6 | 18.667 | | |

| 12741.00 | 12741.00 | Zero Out: | Stream #2 | 263.2 | 0.0 | | | |

| 12741.00 | 127.00 | Convex Routing: | Stream #1 | 6336.6 | 6326.8 | 18.667 | | |

| 12710.00 | 127.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 131.9 | 16.500 | | |

| 127.00 | 127.00 | Stream #2 Added to: | Stream #1 | 6326.8 | 6338.0 | 18.667 | | |

| 127.00 | 127.00 | Zero Out: | Stream #2 | 131.9 | 0.0 | | | |

| 127.00 | 12902.00 | Convex Routing: | Stream #1 | 6338.0 | 6327.1 | 18.750 | | |

| 50220.00 | 50347.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 285.9 | 16.417 | | |

| 50347.00 | 12902.00 | Convex Routing: | Stream #2 | 285.9 | 281.3 | 16.500 | | |

| 12902.00 | 12902.00 | Stream #2 Added to: | Stream #1 | 6327.1 | 6382.3 | 18.417 | | |

| 12902.00 | 12902.00 | Zero Out: | Stream #2 | 281.3 | 0.0 | | | |

| 12902.00 | 129.00 | Convex Routing: | Stream #1 | 6382.3 | 6374.9 | 18.500 | | |

| 50400.00 | 129.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 106.4 | 16.250 | | |

| 129.00 | 129.00 | Stream #2 Added to: | Stream #1 | 6374.9 | 6383.6 | 18.167 | | |

| 129.00 | 129.00 | Zero Out: | Stream #2 | 106.4 | 0.0 | | | |

| 210.00 | 129.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 79.8 | 16.333 | | |

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: [EV1034CF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6383.6      6410.6|
17.917 |            |           |
 |   129.00     129.00| Zero Out:             Stream #2|      79.8         0.0|
|            |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    6410.6      6406.1|
18.167 |            |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       661.8|
17.000 |            |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     661.8       634.0|
17.417 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     634.0       627.8|
17.833 |            |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       315.1|
16.667 |            |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     627.8       803.3|
17.750 |            |           |
 |   133.00     133.00| Zero Out:             Stream #3|     315.1         0.0|
|            |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|    6406.1      7180.6|
17.917 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     803.3         0.0|
|            |           |
 |   133.00     134.00| Convex Routing:       Stream #1|    7180.6      7169.5|
18.167 |            |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       381.0|
16.417 |            |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    7169.5      7270.9|
18.083 |            |           |
 |   134.00     134.00| Zero Out:             Stream #2|     381.0         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0       394.6|
17.500 |            |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    7270.9      7605.9|
18.083 |            |           |
 |   134.00     134.00| Zero Out:             Stream #2|     394.6         0.0|
|            |           |
 |   134.00     134.00| View:                 Stream #1|                7605.9|
18.083 |      5915.14|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 134U                               *
* 10-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV1034UF.DAT
  TIME/DATE OF STUDY: 06:21 06/12/2019


                       ** 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  12603.00 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 =    0.128 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 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) =  0.146; LOW LOSS FRACTION = 0.406
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.175 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.400
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.326 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.354
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.702
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.446 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.296; 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    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.324 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.593
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.212 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.837
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.243 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.386
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.637 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.615
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.338 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.699
  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<<<<<

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

|INPUT FILENAME: [EV1034UF.DAT]

Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO MAX. STORAGE PEAK (HR)	MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	6483.9	18.333		
119.00	12603.00	Convex Routing: Stream #1	6483.9	6470.1	18.417		
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	76.3	16.167		
12603.00	12603.00	Stream #2 Added to: Stream #1	6470.1	6478.2	18.417		
12603.00	12603.00	Zero Out: Stream #2	76.3	0.0			
12603.00	126.00	Convex Routing: Stream #1	6478.2	6463.6	18.500		
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	149.3	16.333		
126.00	126.00	Stream #2 Added to: Stream #1	6463.6	6478.8	18.500		
126.00	126.00	Zero Out: Stream #2	149.3	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	33.7	16.417		
126.00	126.00	Stream #2 Added to: Stream #1	6478.8	6480.6	18.500		
126.00	126.00	Zero Out: Stream #2	33.7	0.0			
126.00	12720.50	Convex Routing: Stream #1	6480.6	6444.0	18.583		
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	115.7	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	55.2	16.250		
12720.50	12720.50	Stream #3 Added to: Stream #2	115.7	164.0	16.250		
12720.50	12720.50	Zero Out: Stream #3	55.2	0.0			
12720.50	12720.50	Stream #2 Added to: Stream #1	6444.0	6471.4	18.583		
12720.50	12720.50	Zero Out: Stream #2	164.0	0.0			

12720.50	12741.00	Convex Routing:	Stream #1	6471.4	6458.2	18.667
320.00	12741.00	Subarea (UH) Added to Stream #2		0.0	229.1	16.417
390.00	12741.00	Subarea (UH) Added to Stream #4		0.0	41.8	16.417
12741.00	12741.00	Stream #4 Added to:	Stream #2	229.1	270.9	16.417
12741.00	12741.00	Zero Out:	Stream #4	41.8	0.0	
12741.00	12741.00	Stream #2 Added to:	Stream #1	6458.2	6512.3	18.667
12741.00	12741.00	Zero Out:	Stream #2	270.9	0.0	
12741.00	127.00	Convex Routing:	Stream #1	6512.3	6502.8	18.667
12710.00	127.00	Subarea (UH) Added to Stream #2		0.0	138.3	16.500
127.00	127.00	Stream #2 Added to:	Stream #1	6502.8	6514.0	18.667
127.00	127.00	Zero Out:	Stream #2	138.3	0.0	
127.00	12902.00	Convex Routing:	Stream #1	6514.0	6503.1	18.750
50220.00	50347.00	Subarea (UH) Added to Stream #2		0.0	295.8	16.417
50347.00	12902.00	Convex Routing:	Stream #2	295.8	290.7	16.500
12902.00	12902.00	Stream #2 Added to:	Stream #1	6503.1	6554.3	18.417
12902.00	12902.00	Zero Out:	Stream #2	290.7	0.0	
12902.00	129.00	Convex Routing:	Stream #1	6554.3	6546.2	18.500
50400.00	129.00	Subarea (UH) Added to Stream #2		0.0	111.3	16.250
129.00	129.00	Stream #2 Added to:	Stream #1	6546.2	6553.5	18.500
129.00	129.00	Zero Out:	Stream #2	111.3	0.0	
210.00	129.00	Subarea (UH) Added to Stream #2		0.0	82.2	16.333

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: [EV1034UF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6553.5      6573.1|
18.167 |            |           |
 |   129.00     129.00| Zero Out:             Stream #2|      82.2         0.0|
|            |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    6573.1      6569.8|
18.250 |            |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       682.0|
17.000 |            |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     682.0       653.0|
17.417 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     653.0       646.4|
17.833 |            |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       324.3|
16.667 |            |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     646.4       822.7|
17.750 |            |           |
 |   133.00     133.00| Zero Out:             Stream #3|     324.3         0.0|
|            |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|    6569.8      7352.4|
17.917 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     822.7         0.0|
|            |           |
 |   133.00     134.00| Convex Routing:       Stream #1|    7352.4      7341.1|
18.167 |            |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       395.2|
16.417 |            |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    7341.1      7440.7|
18.167 |            |           |
 |   134.00     134.00| Zero Out:             Stream #2|     395.2         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   134.00     134.00| View:                 Stream #1|                7440.7|
18.167 |      5738.30|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 137                                *
* 10-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV10137F.DAT
  TIME/DATE OF STUDY: 06:20 06/12/2019


                        ** 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  12603.00 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 =    0.128 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 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) =  0.146; LOW LOSS FRACTION = 0.406
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.175 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.400
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.326 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.354
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.702
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.446 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.296; 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    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.324 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.593
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.212 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.837
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.243 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.386
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.637 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.615
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.338 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.699
  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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.639
  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    137.00 TO NODE    137.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
============================================================================
============================================================================
```

```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                    * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV10137F.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      6253.6|
18.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    6253.6      6240.5|
18.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        72.9|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    6240.5      6248.6|
18.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      72.9         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    6248.6      6235.5|
18.500 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       141.7|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6235.5      6250.7|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     141.7         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        31.7|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6250.7      6252.5|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      31.7         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    6252.5      6215.2|
18.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       111.3|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        53.0|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     111.3       158.0|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      53.0         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    6215.2      6242.6|
18.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     158.0         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    6242.6      6230.6|
18.667 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       221.1|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        40.0|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     221.1       261.1|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      40.0         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    6230.6      6284.7|
18.667 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     261.1         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    6284.7      6275.0|
18.667 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       130.2|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    6275.0      6286.3|
18.667 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     130.2         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    6286.3      6275.2|
18.750 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       283.2|
16.417 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     283.2       278.9|
16.500 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    6275.2      6331.0|
18.417 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     278.9         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    6331.0      6323.8|
18.500 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       105.0|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6323.8      6335.3|
17.917 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     105.0         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        79.1|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                  |
 +-------------------------------------------------------------------------------
-------------------------------------+
```

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO MAX. STORAGE PEAK (HR)	MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	6335.3	6362.9	17.917		
129.00	129.00	Zero Out: Stream #2	79.1	0.0			
129.00	133.00	Convex Routing: Stream #1	6362.9	6358.2	18.000		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	656.2	17.000		
132.00	13305.00	Convex Routing: Stream #2	656.2	628.7	17.417		
13305.00	133.00	Convex Routing: Stream #2	628.7	622.7	17.833		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	312.4	16.667		
133.00	133.00	Stream #3 Added to: Stream #2	622.7	797.8	17.750		
133.00	133.00	Zero Out: Stream #3	312.4	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	6358.2	7129.3	17.917		
133.00	133.00	Zero Out: Stream #2	797.8	0.0			
133.00	134.00	Convex Routing: Stream #1	7129.3	7118.2	18.167		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	377.0	16.417		
134.00	134.00	Stream #2 Added to: Stream #1	7118.2	7220.0	18.083		
134.00	134.00	Zero Out: Stream #2	377.0	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	391.6	17.500		
134.00	134.00	Stream #2 Added to: Stream #1	7220.0	7553.1	18.083		
134.00	134.00	Zero Out: Stream #2	391.6	0.0			
134.00	137.00	Convex Routing: Stream #1	7553.1	7543.8	18.250		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       248.7|
16.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|    7543.8      7627.9|
18.250 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     248.7         0.0|
|             |           |
 |   137.00     137.00| View:                 Stream #1|                7627.9|
18.250 |      6002.99|     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
```

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

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

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 138                                 *
* 10-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV10138F.DAT
  TIME/DATE OF STUDY: 06:20 06/12/2019


                        ** 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  12603.00 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 =    0.128 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 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) =  0.146; LOW LOSS FRACTION = 0.406
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.175 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.400
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.326 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.354
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.702
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.446 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.296; 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    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.324 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.593
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.212 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.837
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.243 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.386
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.637 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.615
 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,
 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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.338 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.699
 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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.639
  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) =     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 =    0.560 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: [EV10138F.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      6197.3|
18.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    6197.3      6183.9|
18.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        72.0|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    6183.9      6192.0|
18.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      72.0         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    6192.0      6179.5|
18.500 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       139.8|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6179.5      6194.7|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     139.8         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        31.2|
16.417 |             |           |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6194.7      6196.5|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      31.2         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    6196.5      6159.1|
18.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       110.3|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        52.5|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     110.3       156.6|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      52.5         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    6159.1      6186.5|
18.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     156.6         0.0|
|            |           |
```

12720.50	12741.00	Convex Routing:	Stream #1	6186.5	6174.7	18.667
320.00	12741.00	Subarea (UH) Added to Stream #2		0.0	219.2	16.417
390.00	12741.00	Subarea (UH) Added to Stream #4		0.0	39.5	16.417
12741.00	12741.00	Stream #4 Added to:	Stream #2	219.2	258.7	16.417
12741.00	12741.00	Zero Out:	Stream #4	39.5	0.0	
12741.00	12741.00	Stream #2 Added to:	Stream #1	6174.7	6228.8	18.667
12741.00	12741.00	Zero Out:	Stream #2	258.7	0.0	
12741.00	127.00	Convex Routing:	Stream #1	6228.8	6219.0	18.667
12710.00	127.00	Subarea (UH) Added to Stream #2		0.0	128.3	16.500
127.00	127.00	Stream #2 Added to:	Stream #1	6219.0	6230.3	18.667
127.00	127.00	Zero Out:	Stream #2	128.3	0.0	
127.00	12902.00	Convex Routing:	Stream #1	6230.3	6219.1	18.750
50220.00	50347.00	Subarea (UH) Added to Stream #2		0.0	280.1	16.417
50347.00	12902.00	Convex Routing:	Stream #2	280.1	276.0	16.500
12902.00	12902.00	Stream #2 Added to:	Stream #1	6219.1	6275.6	18.417
12902.00	12902.00	Zero Out:	Stream #2	276.0	0.0	
12902.00	129.00	Convex Routing:	Stream #1	6275.6	6269.3	17.917
50400.00	129.00	Subarea (UH) Added to Stream #2		0.0	103.5	16.250
129.00	129.00	Stream #2 Added to:	Stream #1	6269.3	6283.6	17.917
129.00	129.00	Zero Out:	Stream #2	103.5	0.0	
210.00	129.00	Subarea (UH) Added to Stream #2		0.0	78.4	16.333

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: [EV10138F.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6283.6      6311.4|
17.917 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|      78.4         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|    6311.4      6306.8|
18.000 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0       650.0|
17.000 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|     650.0       623.0|
17.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|     623.0       617.1|
17.833 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       309.6|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|     617.1       792.6|
17.750 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     309.6         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|    6306.8      7072.8|
17.917 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|     792.6         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|    7072.8      7061.6|
18.167 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       372.6|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    7061.6      7164.4|
18.083 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     372.6         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0       388.4|
17.500 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|    7164.4      7495.5|
18.083 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     388.4         0.0|
|             |           |
 |   134.00     137.00| Convex Routing:       Stream #1|    7495.5      7486.5|
18.250 |             |           |
```



```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       246.1|
16.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|    7486.5      7570.9|
18.250 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     246.1         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|    7570.9      7561.0|
18.417 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0       204.9|
16.583 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|    7561.0      7629.9|
18.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|     204.9         0.0|
|             |           |
 |   138.00     138.00| View:                 Stream #1|                7629.9|
18.417 |      6075.65|     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                        |
 +-------------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
```

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
          (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                          Analysis prepared by:

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 139                                 *
* 10-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV10139F.DAT
  TIME/DATE OF STUDY: 06:19 06/12/2019


                        ** 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  12603.00 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 =    0.128 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.920
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 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) =  0.146; LOW LOSS FRACTION = 0.406
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.175 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.400
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.326 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.354
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.702
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.446 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.296; 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    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.324 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.593
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.212 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.837
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.243 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.386
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.637 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.615
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.338 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.699
  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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.427 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.639
  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) =     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 =    0.560 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 =    0.257 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: [EV10139F.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      6179.7|
18.333 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|    6179.7      6166.2|
18.417 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0        71.7|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|    6166.2      6174.3|
18.417 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|      71.7         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|    6174.3      6162.0|
18.500 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       139.2|
16.333 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6162.0      6177.2|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     139.2         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        31.0|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|    6177.2      6179.0|
18.500 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      31.0         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|    6179.0      6141.4|
18.583 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       109.9|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        52.3|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     109.9       156.1|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      52.3         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|    6141.4      6168.8|
18.583 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     156.1         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|    6168.8      6157.2|
18.667 |             |           |
 +--------------------+------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       218.5|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        39.4|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     218.5       257.9|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      39.4         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|    6157.2      6211.3|
18.667 |             |           |
 +--------------------+------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     257.9         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|    6211.3      6201.4|
18.667 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       127.6|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|    6201.4      6212.7|
18.667 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     127.6         0.0|
|            |           |
 +--------------------+------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|    6212.7      6201.4|
18.750 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       279.1|
16.417 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     279.1       275.1|
16.500 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|    6201.4      6258.4|
18.417 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     275.1         0.0|
|            |           |
 +--------------------+------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|    6258.4      6253.2|
17.917 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       103.0|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|    6253.2      6267.6|
17.917 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     103.0         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0        78.1|
16.333 |             |           |
 +--------------------+------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                        |
 +-------------------------------------------------------------------------------
-------------------------------------+
```

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	6267.6	6295.4	17.917		
129.00	129.00	Zero Out: Stream #2	78.1	0.0			
129.00	133.00	Convex Routing: Stream #1	6295.4	6290.8	18.000		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	647.9	17.000		
132.00	13305.00	Convex Routing: Stream #2	647.9	620.9	17.417		
13305.00	133.00	Convex Routing: Stream #2	620.9	615.2	17.833		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	308.6	16.667		
133.00	133.00	Stream #3 Added to: Stream #2	615.2	790.2	17.750		
133.00	133.00	Zero Out: Stream #3	308.6	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	6290.8	7055.4	17.917		
133.00	133.00	Zero Out: Stream #2	790.2	0.0			
133.00	134.00	Convex Routing: Stream #1	7055.4	7044.5	18.167		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	371.1	16.417		
134.00	134.00	Stream #2 Added to: Stream #1	7044.5	7147.2	18.083		
134.00	134.00	Zero Out: Stream #2	371.1	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	387.3	17.500		
134.00	134.00	Stream #2 Added to: Stream #1	7147.2	7477.7	18.083		
134.00	134.00	Zero Out: Stream #2	387.3	0.0			
134.00	137.00	Convex Routing: Stream #1	7477.7	7468.7	18.250		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       245.2|
16.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|    7468.7      7553.2|
18.250 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     245.2         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|    7553.2      7543.3|
18.417 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0       204.1|
16.583 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|    7543.3      7612.3|
18.417 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|     204.1         0.0|
|             |           |
 |   138.00     139.00| Convex Routing:       Stream #1|    7612.3      7609.2|
18.500 |             |           |
 |   138.00     139.00| Subarea (UH) Added to Stream #2|       0.0       127.5|
16.333 |             |           |
 |   139.00     139.00| Stream #2 Added to:   Stream #1|    7609.2      7631.5|
18.500 |             |           |
 |   139.00     139.00| Zero Out:             Stream #2|     127.5         0.0|
|             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   139.00     139.00| View:                 Stream #1|                7631.5|
18.500 |      6117.33|     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                        |
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   END OF FLOODSCx ROUTING ANALYSIS
```

```
______________________________________________________________________________
******************************************************************************

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                         Analysis prepared by:

                       Michael Baker International
                     5 Hutton Centre Drive, Suite 500
                          Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 119                                 *
* 25-YR EV APRIL 2019 FKAZI                                              *
 ************************************************************************

  FILE NAME: EV25119F.DAT
  TIME/DATE OF STUDY: 09:31 04/10/2019


                        ** 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 = 0.345; 30-MINUTE = 0.395;  1-HOUR = 0.435
    3-HOUR = 0.785;    6-HOUR = 0.904; 24-HOUR = 0.944


******************************************************************************
  FLOW PROCESS FROM NODE    119.00 TO NODE    119.00 IS CODE =  11
------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
==============================================================================
==============================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV25119F.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     14918.1|
18.167 |             |           |
 |   119.00     119.00| View:                  Stream #1|               14918.1|
18.167 |     11843.75|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 126                                *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV25126F.DAT
  TIME/DATE OF STUDY: 10:52 06/06/2019


                        ** 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  12603.00 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 =    0.124 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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: [EV25126F.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     14853.4|
18.167 |            |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   14853.4     14762.1|
18.083 |            |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       121.9|
16.167 |            |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   14762.1     14784.5|
18.083 |            |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     121.9         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   14784.5     14759.4|
18.167 |            |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       268.5|
16.250 |            |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   14759.4     14820.4|
18.167 |            |           |
 |   126.00     126.00| Zero Out:             Stream #2|     268.5         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        65.4|
16.333 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   14820.4     14830.4|
18.167 |            |           |
 |   126.00     126.00| Zero Out:             Stream #2|      65.4         0.0|
|            |           |
 |   126.00     126.00| View:                 Stream #1|               14830.4|
18.167 |     11960.02|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 127                                *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV25127F.DAT
  TIME/DATE OF STUDY: 06:15 06/12/2019


                       ** 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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  12603.00 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 =    0.124 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


**************************************************************************
  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    126.00 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.242 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.362
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.168 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.368
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.321
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.243; LOW LOSS FRACTION = 0.511
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.648
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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: [EV25127F.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     14693.0|
18.167 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   14693.0     14604.7|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       118.8|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   14604.7     14627.2|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     118.8         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   14627.2     14602.8|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       261.5|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   14602.8     14664.1|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     261.5         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|   14664.1     14674.2|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      63.4         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   14674.2     14659.0|
18.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       169.9|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        81.9|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     169.9       245.0|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      81.9         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   14659.0     14703.4|
18.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     245.0         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   14703.4     14673.5|
18.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       326.8|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        74.2|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     326.8       401.0|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      74.2         0.0|
|            |          |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   14673.5     14779.8|
18.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     401.0         0.0|
|            |          |
 | 12741.00     127.00| Convex Routing:       Stream #1|   14779.8     14760.5|
18.417 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       286.0|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   14760.5     14827.0|
18.333 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     286.0         0.0|
|            |          |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00     127.00| View:                 Stream #1|               14827.0|
18.333 |     12276.04|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133C                              *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV2533CF.DAT
  TIME/DATE OF STUDY: 06:14 06/12/2019


                        ** 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  12603.00 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 =    0.124 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.242 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.362
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.168 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.368
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.321
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.243; LOW LOSS FRACTION = 0.511
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.648
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.296 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.518
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.276; LOW LOSS FRACTION = 0.637
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.352
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.408
  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: [EV2533CF.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     14229.7|
18.167 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   14229.7     14153.0|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       109.0|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   14153.0     14176.1|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     109.0         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   14176.1     14153.1|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       239.3|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   14153.1     14216.0|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     239.3         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        57.3|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   14216.0     14226.4|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      57.3         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   14226.4     14211.2|
18.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       157.5|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        75.6|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     157.5       226.5|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      75.6         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   14211.2     14256.1|
18.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     226.5         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   14256.1     14229.1|
18.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       304.7|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        68.6|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     304.7       373.3|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      68.6         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   14229.1     14337.5|
18.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     373.3         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   14337.5     14319.4|
18.417 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       262.8|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   14319.4     14389.0|
18.333 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     262.8         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   14389.0     14381.4|
18.417 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       438.9|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     438.9       429.2|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   14381.4     14531.2|
17.417 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     429.2         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   14531.2     14523.1|
17.500 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       180.9|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   14523.1     14564.8|
17.500 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     180.9         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       110.3|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                  |
 +-------------------------------------------------------------------------------
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```

```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                    * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV2533CF.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 |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   14564.8     14604.1|
17.500 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     110.3         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   14604.1     14596.3|
17.583 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1167.2|
16.917 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1167.2      1125.9|
17.417 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1125.9      1114.7|
17.667 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       538.9|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1114.7      1474.1|
17.500 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     538.9         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   14596.3     16068.5|
17.583 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1474.1         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|               16068.5|
17.583 |     13364.50|     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
```

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

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            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 133T                               *
* 25-YR EV APRIL 2019 FKAZI                                             *
 *************************************************************************

  FILE NAME: EV2533TF.DAT
  TIME/DATE OF STUDY: 09:27 04/10/2019


                       ** 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 = 0.986


**************************************************************************
  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.408
  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 = 0.986


**************************************************************************
  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: [EV2533TF.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 |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      2536.6|
16.917 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    2536.6      2443.6|
17.167 |             |           |
 | 13305.00     133.00| Convex Routing:       Stream #2|    2443.6      2399.7|
17.417 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0      1159.3|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    2399.7      2848.6|
17.333 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #3|    1159.3         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|       0.0      2848.6|
17.333 |             |           |
 |   133.00     133.00| Zero Out:             Stream #2|    2848.6         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                2848.6|
17.333 |      1046.02|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 133U                               *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV2533UF.DAT
  TIME/DATE OF STUDY: 06:15 06/12/2019


                        ** 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  12603.00 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 =    0.124 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.242 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.362
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.168 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.368
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.321
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.243; LOW LOSS FRACTION = 0.511
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.648
  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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.296 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.518
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.276; LOW LOSS FRACTION = 0.637
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.352
  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    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: [EV2533UF.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     14590.2|
18.167 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   14590.2     14504.2|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       116.6|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   14504.2     14526.9|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     116.6         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   14526.9     14502.7|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       256.7|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   14502.7     14564.3|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     256.7         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        62.1|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   14564.3     14574.5|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      62.1         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   14574.5     14559.5|
18.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       167.2|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        80.5|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     167.2       241.0|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      80.5         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   14559.5     14604.0|
18.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     241.0         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   14604.0     14574.0|
18.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       322.0|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        73.0|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     322.0       395.0|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      73.0         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   14574.0     14680.8|
18.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     395.0         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   14680.8     14662.7|
18.417 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       281.0|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   14662.7     14728.8|
18.333 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     281.0         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   14728.8     14720.8|
18.417 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       468.6|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     468.6       459.2|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   14720.8     14819.5|
18.417 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     459.2         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   14819.5     14805.2|
18.500 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       194.9|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   14805.2     14832.0|
17.500 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     194.9         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       117.0|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV2533UF.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 |
 +-------------------+--------------------------------+----------------------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   14832.0     14870.8|
17.500 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     117.0         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   14870.8     14863.9|
17.583 |             |           |
 |   133.00     133.00| View:                 Stream #1|               14863.9|
17.583 |     12504.12|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 134C                               *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV2534CF.DAT
  TIME/DATE OF STUDY: 06:14 06/12/2019


                        ** 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12603.00 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 =    0.124 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


**************************************************************************
  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    126.00 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.242 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.362
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.168 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.368
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.321
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.243; LOW LOSS FRACTION = 0.511
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.648
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.296 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.518
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.276; LOW LOSS FRACTION = 0.637
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.352
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.408
 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
   3-HOUR = 0.740;    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) =  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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.322 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.481
 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
   3-HOUR = 0.740;    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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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: [EV2534CF.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     13948.2|
18.167 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   13948.2     13875.3|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       103.6|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   13875.3     13898.8|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     103.6         0.0|
|            |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   13898.8     13878.1|
18.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       227.4|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   13878.1     13940.8|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     227.4         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        54.0|
16.333 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   13940.8     13951.3|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      54.0         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   13951.3     13937.7|
18.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       150.6|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        72.1|
16.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     150.6       216.6|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      72.1         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   13937.7     13982.9|
18.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     216.6         0.0|
|            |           |
```

12720.50	12741.00	Convex Routing:	Stream #1	13982.9	13956.5	18.333		
320.00	12741.00	Subarea (UH) Added to Stream #2		0.0	292.3	16.417		
390.00	12741.00	Subarea (UH) Added to Stream #4		0.0	65.4	16.417		
12741.00	12741.00	Stream #4 Added to:	Stream #2	292.3	357.8	16.417		
12741.00	12741.00	Zero Out:	Stream #4	65.4	0.0			
12741.00	12741.00	Stream #2 Added to:	Stream #1	13956.5	14066.3	18.333		
12741.00	12741.00	Zero Out:	Stream #2	357.8	0.0			
12741.00	127.00	Convex Routing:	Stream #1	14066.3	14050.3	18.417		
12710.00	127.00	Subarea (UH) Added to Stream #2		0.0	249.7	16.500		
127.00	127.00	Stream #2 Added to:	Stream #1	14050.3	14137.0	17.333		
127.00	127.00	Zero Out:	Stream #2	249.7	0.0			
127.00	12902.00	Convex Routing:	Stream #1	14137.0	14131.8	17.417		
50220.00	50347.00	Subarea (UH) Added to Stream #2		0.0	418.6	16.333		
50347.00	12902.00	Convex Routing:	Stream #2	418.6	409.5	16.417		
12902.00	12902.00	Stream #2 Added to:	Stream #1	14131.8	14319.1	17.417		
12902.00	12902.00	Zero Out:	Stream #2	409.5	0.0			
12902.00	129.00	Convex Routing:	Stream #1	14319.1	14310.2	17.500		
50400.00	129.00	Subarea (UH) Added to Stream #2		0.0	171.0	16.250		
129.00	129.00	Stream #2 Added to:	Stream #1	14310.2	14352.4	17.500		
129.00	129.00	Zero Out:	Stream #2	171.0	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2		0.0	105.5	16.333		

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: [EV2534CF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   14352.4     14392.0|
17.500 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     105.5         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   14392.0     14383.5|
17.583 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1124.5|
16.917 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1124.5      1086.1|
17.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1086.1      1076.1|
17.667 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       519.6|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1076.1      1429.3|
17.583 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     519.6         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   14383.5     15812.8|
17.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1429.3         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   15812.8     15798.7|
17.750 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       601.1|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   15798.7     16036.2|
17.750 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     601.1         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0       892.5|
17.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   16036.2     16893.6|
17.667 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     892.5         0.0|
|             |           |
 |   134.00     134.00| View:                 Stream #1|               16893.6|
17.667 |     14162.91|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 134U                               *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV2534UF.DAT
  TIME/DATE OF STUDY: 06:14 06/12/2019


                        ** 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  12603.00 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 =    0.124 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
======================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.242 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.362
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
======================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.168 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.368
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
======================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.321
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.243; LOW LOSS FRACTION = 0.511
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.648
  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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.296 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.518
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.276; LOW LOSS FRACTION = 0.637
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.352
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.408
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.322 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.481
  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<<<<<

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [EV2534UF.DAT]

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS		UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1		0.0	14142.9	18.167		
119.00	12603.00	Convex Routing:	Stream #1	14142.9	14068.3	18.083		
810.00	12603.00	Subarea (UH) Added to Stream #2		0.0	107.1	16.167		
12603.00	12603.00	Stream #2 Added to:	Stream #1	14068.3	14091.6	18.083		
12603.00	12603.00	Zero Out:	Stream #2	107.1	0.0			
12603.00	126.00	Convex Routing:	Stream #1	14091.6	14068.7	18.167		
920.00	126.00	Subarea (UH) Added to Stream #2		0.0	235.0	16.250		
126.00	126.00	Stream #2 Added to:	Stream #1	14068.7	14131.9	18.167		
126.00	126.00	Zero Out:	Stream #2	235.0	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2		0.0	56.1	16.333		
126.00	126.00	Stream #2 Added to:	Stream #1	14131.9	14142.4	18.167		
126.00	126.00	Zero Out:	Stream #2	56.1	0.0			
126.00	12720.50	Convex Routing:	Stream #1	14142.4	14127.2	18.333		
430.00	12720.50	Subarea (UH) Added to Stream #2		0.0	155.1	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3		0.0	74.4	16.250		
12720.50	12720.50	Stream #3 Added to:	Stream #2	155.1	222.9	16.250		
12720.50	12720.50	Zero Out:	Stream #3	74.4	0.0			
12720.50	12720.50	Stream #2 Added to:	Stream #1	14127.2	14172.2	18.333		
12720.50	12720.50	Zero Out:	Stream #2	222.9	0.0			

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   14172.2     14145.6|
18.333 |             |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       300.4|
16.417 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        67.5|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     300.4       367.9|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      67.5         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   14145.6     14254.5|
18.333 |             |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     367.9         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   14254.5     14236.9|
18.417 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       258.3|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   14236.9     14306.8|
18.333 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     258.3         0.0|
|            |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   14306.8     14299.4|
18.417 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       431.7|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     431.7       422.1|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   14299.4     14468.0|
17.417 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     422.1         0.0|
|            |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   14468.0     14459.7|
17.500 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       177.4|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   14459.7     14501.6|
17.500 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     177.4         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       108.6|
16.333 |             |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+------------+-----------+
 |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: [EV2534UF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   14501.6     14540.9|
17.500 |            |           |
 |   129.00     129.00| Zero Out:             Stream #2|     108.6         0.0|
|            |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   14540.9     14532.9|
17.583 |            |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1153.0|
16.917 |            |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1153.0      1112.8|
17.417 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1112.8      1102.2|
17.667 |            |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       532.5|
16.667 |            |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1102.2      1459.0|
17.500 |            |           |
 |   133.00     133.00| Zero Out:             Stream #3|     532.5         0.0|
|            |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   14532.9     15990.9|
17.583 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1459.0         0.0|
|            |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   15990.9     15976.2|
17.750 |            |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       620.3|
16.417 |            |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   15976.2     16211.6|
17.750 |            |           |
 |   134.00     134.00| Zero Out:             Stream #2|     620.3         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   134.00     134.00| View:                 Stream #1|               16211.6|
17.750 |     13604.61|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 137                                *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV25137F.DAT
  TIME/DATE OF STUDY: 06:13 06/12/2019


                       ** 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  12603.00 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 =    0.124 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.242 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.362
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.168 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.368
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.321
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.243; LOW LOSS FRACTION = 0.511
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.648
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.296 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.518
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.276; LOW LOSS FRACTION = 0.637
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.352
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.408
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.322 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.481
  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) =     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 =    1191.900 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 = 0.467
  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: [EV25137F.DAT]	
Page: 1 of	

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	13888.7	18.167		
119.00	12603.00	Convex Routing: Stream #1	13888.7	13815.9	18.083		
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	102.7	16.167		
12603.00	12603.00	Stream #2 Added to: Stream #1	13815.9	13839.6	18.083		
12603.00	12603.00	Zero Out: Stream #2	102.7	0.0			
12603.00	126.00	Convex Routing: Stream #1	13839.6	13819.6	18.250		
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	225.4	16.250		
126.00	126.00	Stream #2 Added to: Stream #1	13819.6	13882.4	18.167		
126.00	126.00	Zero Out: Stream #2	225.4	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	53.5	16.333		
126.00	126.00	Stream #2 Added to: Stream #1	13882.4	13893.0	18.167		
126.00	126.00	Zero Out: Stream #2	53.5	0.0			
126.00	12720.50	Convex Routing: Stream #1	13893.0	13879.4	18.333		
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	149.3	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	71.5	16.250		
12720.50	12720.50	Stream #3 Added to: Stream #2	149.3	214.9	16.250		
12720.50	12720.50	Zero Out: Stream #3	71.5	0.0			
12720.50	12720.50	Stream #2 Added to: Stream #1	13879.4	13924.7	18.333		
12720.50	12720.50	Zero Out: Stream #2	214.9	0.0			

12720.50	12741.00	Convex Routing: Stream #1	13924.7	13898.8	18.333		
320.00	12741.00	Subarea (UH) Added to Stream #2	0.0	290.1	16.417		
390.00	12741.00	Subarea (UH) Added to Stream #4	0.0	64.8	16.417		
12741.00	12741.00	Stream #4 Added to: Stream #2	290.1	354.9	16.417		
12741.00	12741.00	Zero Out: Stream #4	64.8	0.0			
12741.00	12741.00	Stream #2 Added to: Stream #1	13898.8	14008.9	18.333		
12741.00	12741.00	Zero Out: Stream #2	354.9	0.0			
12741.00	127.00	Convex Routing: Stream #1	14008.9	13992.5	18.417		
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	247.3	16.500		
127.00	127.00	Stream #2 Added to: Stream #1	13992.5	14090.9	17.333		
127.00	127.00	Zero Out: Stream #2	247.3	0.0			
127.00	12902.00	Convex Routing: Stream #1	14090.9	14085.6	17.417		
50220.00	50347.00	Subarea (UH) Added to Stream #2	0.0	415.1	16.333		
50347.00	12902.00	Convex Routing: Stream #2	415.1	406.0	16.417		
12902.00	12902.00	Stream #2 Added to: Stream #1	14085.6	14272.9	17.417		
12902.00	12902.00	Zero Out: Stream #2	406.0	0.0			
12902.00	129.00	Convex Routing: Stream #1	14272.9	14263.9	17.500		
50400.00	129.00	Subarea (UH) Added to Stream #2	0.0	169.2	16.250		
129.00	129.00	Stream #2 Added to: Stream #1	14263.9	14306.2	17.500		
129.00	129.00	Zero Out: Stream #2	169.2	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2	0.0	104.7	16.333		

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

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO MAX. STORAGE PEAK (HR)	MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	14306.2	14345.9	17.500		
129.00	129.00	Zero Out: Stream #2	104.7	0.0			
129.00	133.00	Convex Routing: Stream #1	14345.9	14337.2	17.583		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1116.2	16.917		
132.00	13305.00	Convex Routing: Stream #2	1116.2	1078.6	17.417		
13305.00	133.00	Convex Routing: Stream #2	1078.6	1068.8	17.667		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	515.9	16.667		
133.00	133.00	Stream #3 Added to: Stream #2	1068.8	1421.3	17.583		
133.00	133.00	Zero Out: Stream #3	515.9	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	14337.2	15758.4	17.583		
133.00	133.00	Zero Out: Stream #2	1421.3	0.0			
133.00	134.00	Convex Routing: Stream #1	15758.4	15744.6	17.750		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	595.7	16.417		
134.00	134.00	Stream #2 Added to: Stream #1	15744.6	15982.6	17.750		
134.00	134.00	Zero Out: Stream #2	595.7	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	887.4	17.417		
134.00	134.00	Stream #2 Added to: Stream #1	15982.6	16837.0	17.667		
134.00	134.00	Zero Out: Stream #2	887.4	0.0			
134.00	137.00	Convex Routing: Stream #1	16837.0	16822.2	17.833		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       383.7|
16.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   16822.2     16996.5|
17.833 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     383.7         0.0|
|             |           |
 |   137.00     137.00| View:                 Stream #1|               16996.5|
17.833 |     14332.93|     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

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 138                                *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV25138F.DAT
  TIME/DATE OF STUDY: 06:13 06/12/2019


                       ** 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  12603.00 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 =    0.124 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.242 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.362
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.168 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.368
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.321
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.243; LOW LOSS FRACTION = 0.511
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.648
  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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.296 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.518
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.276; LOW LOSS FRACTION = 0.637
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.352
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.408
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.322 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.481
  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) =     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 =    1191.900 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 = 0.467
  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) =     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 =    0.526 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    138.00 TO NODE    138.00 IS CODE =  11
--------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
================================================================================
================================================================================
```



```
 +--------------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV25138F.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     13825.6|
18.167 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   13825.6     13753.2|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       101.6|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   13753.2     13777.0|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     101.6         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   13777.0     13758.0|
18.250 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       223.2|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   13758.0     13820.3|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     223.2         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        52.8|
16.333 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   13820.3     13831.0|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      52.8         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   13831.0     13817.9|
18.333 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       147.9|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        70.8|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     147.9       213.0|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      70.8         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   13817.9     13863.2|
18.333 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     213.0         0.0|
|            |           |
```

12720.50	12741.00	Convex Routing:	Stream #1	13863.2	13837.3	18.333		
320.00	12741.00	Subarea (UH) Added to Stream #2		0.0	287.7	16.333		
390.00	12741.00	Subarea (UH) Added to Stream #4		0.0	64.2	16.417		
12741.00	12741.00	Stream #4 Added to:	Stream #2	287.7	351.8	16.417		
12741.00	12741.00	Zero Out:	Stream #4	64.2	0.0			
12741.00	12741.00	Stream #2 Added to:	Stream #1	13837.3	13947.8	18.333		
12741.00	12741.00	Zero Out:	Stream #2	351.8	0.0			
12741.00	127.00	Convex Routing:	Stream #1	13947.8	13932.0	18.417		
12710.00	127.00	Subarea (UH) Added to Stream #2		0.0	244.6	16.500		
127.00	127.00	Stream #2 Added to:	Stream #1	13932.0	14042.0	17.333		
127.00	127.00	Zero Out:	Stream #2	244.6	0.0			
127.00	12902.00	Convex Routing:	Stream #1	14042.0	14036.6	17.417		
50220.00	50347.00	Subarea (UH) Added to Stream #2		0.0	411.1	16.333		
50347.00	12902.00	Convex Routing:	Stream #2	411.1	402.0	16.417		
12902.00	12902.00	Stream #2 Added to:	Stream #1	14036.6	14223.8	17.417		
12902.00	12902.00	Zero Out:	Stream #2	402.0	0.0			
12902.00	129.00	Convex Routing:	Stream #1	14223.8	14214.6	17.500		
50400.00	129.00	Subarea (UH) Added to Stream #2		0.0	167.2	16.250		
129.00	129.00	Stream #2 Added to:	Stream #1	14214.6	14257.0	17.500		
129.00	129.00	Zero Out:	Stream #2	167.2	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2		0.0	103.7	16.333		

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: [EV25138F.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   14257.0     14296.8|
17.500 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     103.7         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   14296.8     14287.9|
17.583 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1107.3|
16.917 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1107.3      1070.1|
17.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1070.1      1060.5|
17.667 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       511.9|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1060.5      1411.9|
17.583 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     511.9         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   14287.9     15699.9|
17.583 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1411.9         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   15699.9     15686.2|
17.750 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       589.7|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   15686.2     15924.9|
17.750 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     589.7         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0       882.0|
17.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   15924.9     16775.2|
17.667 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     882.0         0.0|
|             |           |
 |   134.00     137.00| Convex Routing:       Stream #1|   16775.2     16760.6|
17.833 |             |           |
```



```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       380.1|
16.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   16760.6     16935.4|
17.833 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     380.1         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|   16935.4     16919.3|
18.000 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0       349.9|
16.583 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|   16919.3     17089.6|
18.000 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|     349.9         0.0|
|             |           |
 |   138.00     138.00| View:                 Stream #1|               17089.6|
18.000 |     14498.10|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 139                                *
* 25-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV25139F.DAT
  TIME/DATE OF STUDY: 06:12 06/12/2019


                       ** 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  12603.00 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 =    0.124 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.760
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.242 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.362
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.168 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.368
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.321
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 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) =  0.243; LOW LOSS FRACTION = 0.511
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.648
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.296 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.518
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 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) =  0.276; LOW LOSS FRACTION = 0.637
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.352
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.408
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.322 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.481
  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) =     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 =    1191.900 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 = 0.467
  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) =     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 =    0.526 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 =    0.246 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: [EV25139F.DAT]
Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	13807.2	18.167		
119.00	12603.00	Convex Routing: Stream #1	13807.2	13735.3	18.083		
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	101.2	16.167		
12603.00	12603.00	Stream #2 Added to: Stream #1	13735.3	13759.1	18.083		
12603.00	12603.00	Zero Out: Stream #2	101.2	0.0			
12603.00	126.00	Convex Routing: Stream #1	13759.1	13740.2	18.250		
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	222.4	16.250		
126.00	126.00	Stream #2 Added to: Stream #1	13740.2	13802.6	18.167		
126.00	126.00	Zero Out: Stream #2	222.4	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	52.6	16.333		
126.00	126.00	Stream #2 Added to: Stream #1	13802.6	13813.2	18.167		
126.00	126.00	Zero Out: Stream #2	52.6	0.0			
126.00	12720.50	Convex Routing: Stream #1	13813.2	13800.2	18.333		
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	147.5	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	70.5	16.250		
12720.50	12720.50	Stream #3 Added to: Stream #2	147.5	212.3	16.250		
12720.50	12720.50	Zero Out: Stream #3	70.5	0.0			
12720.50	12720.50	Stream #2 Added to: Stream #1	13800.2	13845.5	18.333		
12720.50	12720.50	Zero Out: Stream #2	212.3	0.0			

12720.50	12741.00	Convex Routing: Stream #1	13845.5	13819.8	18.333		
320.00	12741.00	Subarea (UH) Added to Stream #2	0.0	286.9	16.333		
390.00	12741.00	Subarea (UH) Added to Stream #4	0.0	64.0	16.417		
12741.00	12741.00	Stream #4 Added to: Stream #2	286.9	350.8	16.417		
12741.00	12741.00	Zero Out: Stream #4	64.0	0.0			
12741.00	12741.00	Stream #2 Added to: Stream #1	13819.8	13930.4	18.333		
12741.00	12741.00	Zero Out: Stream #2	350.8	0.0			
12741.00	127.00	Convex Routing: Stream #1	13930.4	13914.6	18.417		
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	243.7	16.500		
127.00	127.00	Stream #2 Added to: Stream #1	13914.6	14027.9	17.333		
127.00	127.00	Zero Out: Stream #2	243.7	0.0			
127.00	12902.00	Convex Routing: Stream #1	14027.9	14022.5	17.417		
50220.00	50347.00	Subarea (UH) Added to Stream #2	0.0	409.7	16.333		
50347.00	12902.00	Convex Routing: Stream #2	409.7	400.6	16.417		
12902.00	12902.00	Stream #2 Added to: Stream #1	14022.5	14209.7	17.417		
12902.00	12902.00	Zero Out: Stream #2	400.6	0.0			
12902.00	129.00	Convex Routing: Stream #1	14209.7	14200.5	17.500		
50400.00	129.00	Subarea (UH) Added to Stream #2	0.0	166.5	16.250		
129.00	129.00	Stream #2 Added to: Stream #1	14200.5	14243.0	17.500		
129.00	129.00	Zero Out: Stream #2	166.5	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2	0.0	103.4	16.333		

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

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS		UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to:	Stream #1	14243.0	14282.7	17.500		
129.00	129.00	Zero Out:	Stream #2	103.4	0.0			
129.00	133.00	Convex Routing:	Stream #1	14282.7	14273.9	17.583		
13010.00	132.00	Subarea (UH) Added to	Stream #2	0.0	1104.4	16.917		
132.00	13305.00	Convex Routing:	Stream #2	1104.4	1067.5	17.417		
13305.00	133.00	Convex Routing:	Stream #2	1067.5	1057.9	17.667		
132.00	133.00	Subarea (UH) Added to	Stream #3	0.0	510.6	16.667		
133.00	133.00	Stream #3 Added to:	Stream #2	1057.9	1409.2	17.583		
133.00	133.00	Zero Out:	Stream #3	510.6	0.0			
133.00	133.00	Stream #2 Added to:	Stream #1	14273.9	15683.1	17.583		
133.00	133.00	Zero Out:	Stream #2	1409.2	0.0			
133.00	134.00	Convex Routing:	Stream #1	15683.1	15669.5	17.750		
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	587.7	16.417		
134.00	134.00	Stream #2 Added to:	Stream #1	15669.5	15908.5	17.750		
134.00	134.00	Zero Out:	Stream #2	587.7	0.0			
13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	880.4	17.417		
134.00	134.00	Stream #2 Added to:	Stream #1	15908.5	16757.8	17.667		
134.00	134.00	Zero Out:	Stream #2	880.4	0.0			
134.00	137.00	Convex Routing:	Stream #1	16757.8	16743.1	17.833		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       378.9|
16.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   16743.1     16918.0|
17.833 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     378.9         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|   16918.0     16901.9|
18.000 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0       348.8|
16.583 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|   16901.9     17072.3|
18.000 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|     348.8         0.0|
|             |           |
 |   138.00     139.00| Convex Routing:       Stream #1|   17072.3     17069.5|
18.000 |             |           |
 |   138.00     139.00| Subarea (UH) Added to Stream #2|       0.0       176.5|
16.333 |             |           |
 |   139.00     139.00| Stream #2 Added to:   Stream #1|   17069.5     17122.9|
18.000 |             |           |
 |   139.00     139.00| Zero Out:             Stream #2|     176.5         0.0|
|             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   139.00     139.00| View:                 Stream #1|               17122.9|
18.000 |     14555.61|     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

```
______________________________________________________________________________
******************************************************************************

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO                                                   *
* ULTIMATE CONDITION - UH FREE DRAINING REGIONAL NODE 119                *
* 50-YR EV APRIL 2019 FKAZI                                              *
 ************************************************************************

  FILE NAME: EV50119F.DAT
  TIME/DATE OF STUDY: 09:16 04/10/2019


                         ** 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 = 0.399
  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 = 0.345; 30-MINUTE = 0.395;  1-HOUR = 0.435
    3-HOUR = 0.785;    6-HOUR = 0.904; 24-HOUR = 0.944


******************************************************************************
  FLOW PROCESS FROM NODE    119.00 TO NODE    119.00 IS CODE =  11
------------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
==============================================================================
==============================================================================
```



```
 +-------------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV50119F.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     17849.8|
18.083 |             |           |
 |   119.00     119.00| View:                  Stream #1|               17849.8|
18.083 |     14162.91|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 126                                *
* 50-YR EV JUNE 2019 ROKAMOTO                                          *
 *************************************************************************

  FILE NAME: EV50126F.DAT
  TIME/DATE OF STUDY: 10:29 06/06/2019


                        ** 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 = 0.399
  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  12603.00 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 =    0.123 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  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    126.00 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 =  0.80;  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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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: [EV50126F.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     17772.6|
18.083 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   17772.6     17642.2|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       137.5|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   17642.2     17668.3|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     137.5         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   17668.3     17646.2|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       310.5|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   17646.2     17718.9|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     310.5         0.0|
|             |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        77.8|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   17718.9     17731.4|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      77.8         0.0|
|             |           |
 |   126.00     126.00| View:                 Stream #1|               17731.4|
18.167 |     14301.76|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 127                               *
* 50-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV50127F.DAT
  TIME/DATE OF STUDY: 15:11 06/11/2019


                        ** 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 = 0.399
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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  12603.00 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 =    0.123 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


**************************************************************************
  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    126.00 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 =  0.80;  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.239 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.341
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


********************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.166 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.349
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


********************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.310 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.303
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.356 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.486
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.615
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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: [EV50127F.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     17581.4|
18.083 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   17581.4     17454.4|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       134.1|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   17454.4     17480.7|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     134.1         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   17480.7     17459.6|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       302.7|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   17459.6     17532.7|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     302.7         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        75.5|
16.333 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   17532.7     17545.3|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      75.5         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   17545.3     17539.0|
18.250 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       191.2|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        91.8|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     191.2       278.1|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      91.8         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   17539.0     17599.2|
18.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     278.1         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   17599.2     17568.2|
18.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       373.1|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        85.5|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     373.1       453.3|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      85.5         0.0|
|            |          |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   17568.2     17704.6|
18.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     453.3         0.0|
|            |          |
 | 12741.00     127.00| Convex Routing:       Stream #1|   17704.6     17676.7|
18.250 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       334.0|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   17676.7     17769.4|
18.250 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     334.0         0.0|
|            |          |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00     127.00| View:                 Stream #1|               17769.4|
18.250 |     14673.85|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 133C                               *
* 50-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV5033CF.DAT
  TIME/DATE OF STUDY: 15:10 06/11/2019


                        ** 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 = 0.399
  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  12603.00 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 =    0.123 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  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    126.00 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 =  0.80;  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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.239 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.341
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.166 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.349
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.310 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.303
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.356 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.486
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.615
  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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.304 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.490
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.200 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.611
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.234 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.333
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.572 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.381
  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: [EV5033CF.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     17029.5|
18.083 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   17029.5     16914.6|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       123.2|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   16914.6     16941.6|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     123.2         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   16941.6     16923.8|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       277.8|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16923.8     16998.8|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     277.8         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        68.4|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16998.8     17011.7|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      68.4         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   17011.7     17005.4|
18.250 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       177.5|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        84.7|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     177.5       257.3|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      84.7         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   17005.4     17066.7|
18.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     257.3         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   17066.7     17037.0|
18.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       347.6|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        79.2|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     347.6       422.6|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      79.2         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   17037.0     17176.8|
18.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     422.6         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   17176.8     17151.3|
18.250 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       307.8|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   17151.3     17246.2|
18.250 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     307.8         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   17246.2     17235.8|
18.333 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       493.7|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     493.7       485.1|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   17235.8     17464.7|
17.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     485.1         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   17464.7     17453.8|
17.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       210.2|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17453.8     17506.4|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     210.2         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       124.0|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV5033CF.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 |
 +-------------------+-------------------------------+----------------------+-
----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17506.4     17554.8|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     124.0         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   17554.8     17543.5|
17.500 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1358.9|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1358.9      1335.6|
17.333 |             |           |
 +-------------------+-------------------------------+----------------------+-
----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1335.6      1321.4|
17.583 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       619.4|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1321.4      1754.4|
17.500 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     619.4         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   17543.5     19297.9|
17.500 |             |           |
 +-------------------+-------------------------------+----------------------+-
----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1754.4         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|               19297.9|
17.500 |     15966.89|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 133T                               *
* 50-YR EV APRIL 2019 FKAZI                                             *
 *************************************************************************

  FILE NAME: EV5033TF.DAT
  TIME/DATE OF STUDY: 09:11 04/10/2019


                       ** 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 = 0.986


**************************************************************************
  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.572 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.381
  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 = 0.986


**************************************************************************
  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: [EV5033TF.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 |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      2969.4|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    2969.4      2884.9|
17.167 |             |           |
 | 13305.00     133.00| Convex Routing:       Stream #2|    2884.9      2858.4|
17.333 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0      1320.2|
16.583 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    2858.4      3391.4|
17.333 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #3|    1320.2         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|       0.0      3391.4|
17.333 |             |           |
 |   133.00     133.00| Zero Out:             Stream #2|    3391.4         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                3391.4|
17.333 |      1236.87|     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
```

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

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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 133U                               *
* 50-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV5033UF.DAT
  TIME/DATE OF STUDY: 15:11 06/11/2019


                        ** 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 = 0.399
  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  12603.00 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 =    0.123 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  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    126.00 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 =  0.80;  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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.239 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.341
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.166 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.349
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.310 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.303
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.356 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.486
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.615
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.304 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.490
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.200 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.611
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.234 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.333
  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    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: [EV5033UF.DAT]
Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	17459.0	18.083		
119.00	12603.00	Convex Routing: Stream #1	17459.0	17334.4	18.083		
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	131.7	16.167		
12603.00	12603.00	Stream #2 Added to: Stream #1	17334.4	17360.8	18.083		
12603.00	12603.00	Zero Out: Stream #2	131.7	0.0			
12603.00	126.00	Convex Routing: Stream #1	17360.8	17340.7	18.167		
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	297.3	16.250		
126.00	126.00	Stream #2 Added to: Stream #1	17340.7	17414.2	18.167		
126.00	126.00	Zero Out: Stream #2	297.3	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	74.0	16.333		
126.00	126.00	Stream #2 Added to: Stream #1	17414.2	17426.9	18.167		
126.00	126.00	Zero Out: Stream #2	74.0	0.0			
126.00	12720.50	Convex Routing: Stream #1	17426.9	17420.6	18.250		
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	188.2	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	90.3	16.250		
12720.50	12720.50	Stream #3 Added to: Stream #2	188.2	273.6	16.250		
12720.50	12720.50	Zero Out: Stream #3	90.3	0.0			
12720.50	12720.50	Stream #2 Added to: Stream #1	17420.6	17481.0	18.250		
12720.50	12720.50	Zero Out: Stream #2	273.6	0.0			

12720.50	12741.00	Convex Routing: Stream #1	17481.0	17450.3	18.250		
320.00	12741.00	Subarea (UH) Added to Stream #2	0.0	367.6	16.333		
390.00	12741.00	Subarea (UH) Added to Stream #4	0.0	84.1	16.417		
12741.00	12741.00	Stream #4 Added to: Stream #2	367.6	446.6	16.417		
12741.00	12741.00	Zero Out: Stream #4	84.1	0.0			
12741.00	12741.00	Stream #2 Added to: Stream #1	17450.3	17587.4	18.250		
12741.00	12741.00	Zero Out: Stream #2	446.6	0.0			
12741.00	127.00	Convex Routing: Stream #1	17587.4	17560.0	18.250		
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	328.1	16.500		
127.00	127.00	Stream #2 Added to: Stream #1	17560.0	17653.2	18.250		
127.00	127.00	Zero Out: Stream #2	328.1	0.0			
127.00	12902.00	Convex Routing: Stream #1	17653.2	17641.8	18.333		
50220.00	50347.00	Subarea (UH) Added to Stream #2	0.0	526.7	16.333		
50347.00	12902.00	Convex Routing: Stream #2	526.7	517.4	16.417		
12902.00	12902.00	Stream #2 Added to: Stream #1	17641.8	17793.7	17.333		
12902.00	12902.00	Zero Out: Stream #2	517.4	0.0			
12902.00	129.00	Convex Routing: Stream #1	17793.7	17784.1	17.417		
50400.00	129.00	Subarea (UH) Added to Stream #2	0.0	226.5	16.250		
129.00	129.00	Stream #2 Added to: Stream #1	17784.1	17836.3	17.417		
129.00	129.00	Zero Out: Stream #2	226.5	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2	0.0	131.6	16.333		

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: [EV5033UF.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 |
 +--------------------+--------------------------------+----------------------+-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17836.3     17884.4|17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     131.6         0.0|       |             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   17884.4     17874.4|17.500 |             |           |
 |   133.00     133.00| View:                 Stream #1|               17874.4|17.500 |     14945.75|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 134C                              *
* 50-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV5034CF.DAT
  TIME/DATE OF STUDY: 15:09 06/11/2019


                        ** 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 = 0.399
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12603.00 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 =    0.123 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


**************************************************************************
  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    126.00 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 =  0.80;  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.239 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.341
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.166 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.349
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.310 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.303
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.356 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.486
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.615
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.304 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.490
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.200 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.611
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.234 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.333
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.572 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.381
 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
   3-HOUR = 0.740;    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) =  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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.317 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.452
 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
   3-HOUR = 0.740;    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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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: [EV5034CF.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     16694.0|
18.083 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   16694.0     16584.7|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       117.2|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   16584.7     16612.2|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     117.2         0.0|
|            |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   16612.2     16596.5|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       264.3|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16596.5     16672.8|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     264.3         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        64.7|
16.333 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16672.8     16685.9|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      64.7         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   16685.9     16679.1|
18.250 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       169.8|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        80.9|
16.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     169.8       246.2|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      80.9         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   16679.1     16741.2|
18.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     246.2         0.0|
|            |           |
```

12720.50	12741.00	Convex Routing:	Stream #1	16741.2	16711.1	18.250		
320.00	12741.00	Subarea (UH) Added to Stream #2		0.0	334.0	16.333		
390.00	12741.00	Subarea (UH) Added to Stream #4		0.0	75.6	16.417		
12741.00	12741.00	Stream #4 Added to:	Stream #2	334.0	405.3	16.417		
12741.00	12741.00	Zero Out:	Stream #4	75.6	0.0			
12741.00	12741.00	Stream #2 Added to:	Stream #1	16711.1	16853.1	18.250		
12741.00	12741.00	Zero Out:	Stream #2	405.3	0.0			
12741.00	127.00	Convex Routing:	Stream #1	16853.1	16829.2	18.250		
12710.00	127.00	Subarea (UH) Added to Stream #2		0.0	293.1	16.500		
127.00	127.00	Stream #2 Added to:	Stream #1	16829.2	16968.1	17.250		
127.00	127.00	Zero Out:	Stream #2	293.1	0.0			
127.00	12902.00	Convex Routing:	Stream #1	16968.1	16961.1	17.333		
50220.00	50347.00	Subarea (UH) Added to Stream #2		0.0	471.2	16.333		
50347.00	12902.00	Convex Routing:	Stream #2	471.2	462.7	16.417		
12902.00	12902.00	Stream #2 Added to:	Stream #1	16961.1	17205.2	17.333		
12902.00	12902.00	Zero Out:	Stream #2	462.7	0.0			
12902.00	129.00	Convex Routing:	Stream #1	17205.2	17193.1	17.417		
50400.00	129.00	Subarea (UH) Added to Stream #2		0.0	198.8	16.250		
129.00	129.00	Stream #2 Added to:	Stream #1	17193.1	17246.0	17.417		
129.00	129.00	Zero Out:	Stream #2	198.8	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2		0.0	118.6	16.333		

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: [EV5034CF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17246.0     17294.6|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     118.6         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   17294.6     17282.2|
17.500 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1308.2|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1308.2      1288.6|
17.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1288.6      1275.1|
17.583 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       597.1|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1275.1      1701.5|
17.500 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     597.1         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   17282.2     18983.7|
17.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1701.5         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   18983.7     18963.4|
17.667 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       691.1|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   18963.4     19253.2|
17.667 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     691.1         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0      1055.7|
17.333 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   19253.2     20288.9|
17.583 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|    1055.7         0.0|
|             |           |
 |   134.00     134.00| View:                 Stream #1|               20288.9|
17.583 |     16911.41|     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
```

```
______________________________________________________________________________
******************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
          (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                          Analysis prepared by:

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 134U                                *
* 50-YR EV JUNE 2019 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV5034UF.DAT
  TIME/DATE OF STUDY: 15:10 06/11/2019


                        ** 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 = 0.399
  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  12603.00 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 =    0.123 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  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    126.00 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 =  0.80;  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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.239 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.341
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.166 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.349
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.310 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.303
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.356 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.486
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.615
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.304 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.490
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.200 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.611
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.234 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.333
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.572 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.381
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.317 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.452
  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<<<<<

* AES FLOODSCx PROGRAM RESULTS SUMMARY *
INPUT FILENAME: [EV5034UF.DAT]
Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES		UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)
10100.00	119.00	Subarea (UH) Added to Stream #1		0.0	16925.9	18.083	
119.00	12603.00	Convex Routing:	Stream #1	16925.9	16813.3	18.083	
810.00	12603.00	Subarea (UH) Added to Stream #2		0.0	121.1	16.167	
12603.00	12603.00	Stream #2 Added to:	Stream #1	16813.3	16840.4	18.083	
12603.00	12603.00	Zero Out:	Stream #2	121.1	0.0		
12603.00	126.00	Convex Routing:	Stream #1	16840.4	16823.3	18.167	
920.00	126.00	Subarea (UH) Added to Stream #2		0.0	273.0	16.250	
126.00	126.00	Stream #2 Added to:	Stream #1	16823.3	16898.7	18.167	
126.00	126.00	Zero Out:	Stream #2	273.0	0.0		
600.00	126.00	Subarea (UH) Added to Stream #2		0.0	67.1	16.333	
126.00	126.00	Stream #2 Added to:	Stream #1	16898.7	16911.7	18.167	
126.00	126.00	Zero Out:	Stream #2	67.1	0.0		
126.00	12720.50	Convex Routing:	Stream #1	16911.7	16905.3	18.250	
430.00	12720.50	Subarea (UH) Added to Stream #2		0.0	174.8	16.333	
413.00	12720.50	Subarea (UH) Added to Stream #3		0.0	83.4	16.250	
12720.50	12720.50	Stream #3 Added to:	Stream #2	174.8	253.3	16.250	
12720.50	12720.50	Zero Out:	Stream #3	83.4	0.0		
12720.50	12720.50	Stream #2 Added to:	Stream #1	16905.3	16966.8	18.250	
12720.50	12720.50	Zero Out:	Stream #2	253.3	0.0		

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   16966.8     16937.4|
18.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       342.6|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        77.9|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     342.6       416.6|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      77.9         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   16937.4     17077.7|
18.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     416.6         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   17077.7     17052.9|
18.250 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       302.7|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   17052.9     17148.2|
18.250 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     302.7         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   17148.2     17141.0|
17.333 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       485.5|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     485.5       476.9|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   17141.0     17387.7|
17.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     476.9         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   17387.7     17376.5|
17.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       206.1|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17376.5     17429.1|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     206.1         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       122.1|
16.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |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: [EV5034UF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17429.1     17477.6|
17.417 |            |           |
 |   129.00     129.00| Zero Out:             Stream #2|     122.1         0.0|
|            |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   17477.6     17466.0|
17.500 |            |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1341.4|
16.833 |            |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1341.4      1319.5|
17.333 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1319.5      1305.7|
17.583 |            |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       611.7|
16.667 |            |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1305.7      1736.3|
17.500 |            |           |
 |   133.00     133.00| Zero Out:             Stream #3|     611.7         0.0|
|            |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   17466.0     19202.3|
17.500 |            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1736.3         0.0|
|            |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   19202.3     19181.6|
17.667 |            |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       712.5|
16.417 |            |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   19181.6     19469.3|
17.667 |            |           |
 |   134.00     134.00| Zero Out:             Stream #2|     712.5         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+------------+-----------+
 |   134.00     134.00| View:                 Stream #1|               19469.3|
17.667 |     16250.10|     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                      |
```



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

   END OF FLOODSCx ROUTING ANALYSIS
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 137                                *
* 50-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV50137F.DAT
  TIME/DATE OF STUDY: 15:09 06/11/2019


                        ** 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 = 0.399
  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  12603.00 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 =    0.123 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  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    126.00 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 =  0.80;  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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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<<<<<
================================================================================
```



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********************************************************************************
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.239 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.341
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.166 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.349
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.310 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.303
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.356 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.486
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.615
  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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.304 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.490
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.200 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.611
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.234 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.333
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.572 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.381
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.317 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.452
  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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.397 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.440
  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: [EV50137F.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     16623.0|
18.083 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   16623.0     16514.4|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       116.1|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   16514.4     16542.1|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     116.1         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   16542.1     16526.8|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       262.0|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16526.8     16603.4|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     262.0         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        64.0|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16603.4     16616.6|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      64.0         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   16616.6     16609.6|
18.250 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       168.4|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        80.2|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     168.4       244.3|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      80.2         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   16609.6     16671.9|
18.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     244.3         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   16671.9     16641.4|
18.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       331.7|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        75.0|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     331.7       402.2|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      75.0         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   16641.4     16783.8|
18.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     402.2         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   16783.8     16760.2|
18.250 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       290.4|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   16760.2     16911.8|
17.250 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     290.4         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   16911.8     16904.6|
17.333 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       467.4|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     467.4       458.9|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   16904.6     17148.0|
17.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     458.9         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   17148.0     17135.6|
17.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       196.8|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17135.6     17188.5|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     196.8         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       117.7|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                        |
 +-------------------------------------------------------------------------------
-------------------------------------+
```

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	17188.5	17237.2	17.417		
129.00	129.00	Zero Out: Stream #2	117.7	0.0			
129.00	133.00	Convex Routing: Stream #1	17237.2	17224.5	17.500		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1298.9	16.833		
132.00	13305.00	Convex Routing: Stream #2	1298.9	1279.7	17.333		
13305.00	133.00	Convex Routing: Stream #2	1279.7	1266.5	17.583		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	593.0	16.667		
133.00	133.00	Stream #3 Added to: Stream #2	1266.5	1691.4	17.500		
133.00	133.00	Zero Out: Stream #3	593.0	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	17224.5	18915.8	17.500		
133.00	133.00	Zero Out: Stream #2	1691.4	0.0			
133.00	134.00	Convex Routing: Stream #1	18915.8	18895.7	17.667		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	685.1	16.417		
134.00	134.00	Stream #2 Added to: Stream #1	18895.7	19186.2	17.667		
134.00	134.00	Zero Out: Stream #2	685.1	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	1049.7	17.333		
134.00	134.00	Stream #2 Added to: Stream #1	19186.2	20217.4	17.583		
134.00	134.00	Zero Out: Stream #2	1049.7	0.0			
134.00	137.00	Convex Routing: Stream #1	20217.4	20194.1	17.750		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       442.3|
16.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   20194.1     20406.1|
17.750 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     442.3         0.0|
|             |           |
 |   137.00     137.00| View:                 Stream #1|               20406.1|
17.750 |     17111.11|     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

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 138                                *
* 50-YR EV JUNE 2019 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV50138F.DAT
  TIME/DATE OF STUDY: 15:08 06/11/2019


                        ** 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 = 0.399
  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  12603.00 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 =    0.123 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  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    126.00 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 =  0.80;  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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.239 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.341
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.166 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.349
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
**************************************************************************
 FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
==========================================================================


**************************************************************************
 FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========================================================================
 THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
 ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
 (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) =     247.00
 CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
 CONSTANT LOSS RATE(CFS) =    0.00
==========================================================================


**************************************************************************
 FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
==========================================================================
 WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.310 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.303
 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  12741.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
==========================================================================
 WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.356 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.486
 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  12741.00 TO NODE  12741.00 IS CODE =   7
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
==========================================================================


**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
==========================================================================


**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
==========================================================================


**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
==========================================================================


**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
 CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.615
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.304 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.490
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.200 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.611
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.234 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.333
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.572 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.381
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.317 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.452
  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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.397 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.440
  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 =    0.513 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: [EV50138F.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     16547.9|
18.083 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   16547.9     16440.3|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       114.9|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   16440.3     16468.1|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     114.9         0.0|
|             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   16468.1     16453.3|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       259.4|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16453.3     16530.2|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     259.4         0.0|
|             |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        63.3|
16.333 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16530.2     16543.4|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      63.3         0.0|
|             |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   16543.4     16536.5|
18.250 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       166.9|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        79.4|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     166.9       242.2|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      79.4         0.0|
|             |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   16536.5     16598.9|
18.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     242.2         0.0|
|             |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   16598.9     16568.8|
18.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       329.1|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        74.3|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     329.1       398.7|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      74.3         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   16568.8     16711.7|
18.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     398.7         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   16711.7     16693.6|
17.250 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       287.4|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   16693.6     16853.0|
17.250 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     287.4         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   16853.0     16845.6|
17.333 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       463.0|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     463.0       454.8|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   16845.6     17087.9|
17.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     454.8         0.0|
|            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   17087.9     17075.2|
17.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       194.6|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17075.2     17128.2|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     194.6         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       116.6|
16.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |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: [EV50138F.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 |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17128.2     17176.9|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     116.6         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   17176.9     17163.9|
17.500 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1288.9|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1288.9      1270.3|
17.333 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1270.3      1257.2|
17.583 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       588.5|
16.667 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1257.2      1680.3|
17.500 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     588.5         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   17163.9     18844.2|
17.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1680.3         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   18844.2     18824.3|
17.667 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       678.4|
16.417 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   18824.3     19115.5|
17.667 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     678.4         0.0|
|             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0      1043.3|
17.333 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   19115.5     20142.2|
17.583 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|    1043.3         0.0|
|             |           |
 |   134.00     137.00| Convex Routing:       Stream #1|   20142.2     20118.9|
17.750 |             |           |
```



```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       438.3|
16.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   20118.9     20331.3|
17.750 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     438.3         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|   20331.3     20314.8|
17.833 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0       410.7|
16.583 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|   20314.8     20531.8|
17.833 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|     410.7         0.0|
|             |           |
 |   138.00     138.00| View:                 Stream #1|                20531.8|
17.833 |     17307.69|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 139                                *
* 50-YR EV JUNE 2019 ROKAMOTO                                          *
 **************************************************************************

  FILE NAME: EV50139F.DAT
  TIME/DATE OF STUDY: 15:13 06/11/2019


                        ** 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 = 0.399
  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  12603.00 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 =    0.123 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  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    126.00 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 =  0.80;  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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.734
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.239 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.341
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.166 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.349
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.310 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.303
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.356 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.486
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.615
  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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.304 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.217; LOW LOSS FRACTION = 0.490
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.200 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.611
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.234 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.126; LOW LOSS FRACTION = 0.333
  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    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  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 =    1715.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.572 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.224; LOW LOSS FRACTION = 0.381
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.317 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.452
  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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.397 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.440
  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 =    0.513 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 =    0.244 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: [EV50139F.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     16526.1|
18.083 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   16526.1     16419.0|
18.083 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       114.5|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   16419.0     16446.8|
18.083 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     114.5         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   16446.8     16432.2|
18.167 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       258.4|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16432.2     16509.1|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     258.4         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        63.0|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   16509.1     16522.4|
18.167 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      63.0         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   16522.4     16515.4|
18.250 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       166.4|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        79.1|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     166.4       241.4|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      79.1         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   16515.4     16577.9|
18.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     241.4         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   16577.9     16547.8|
18.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       328.1|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        74.0|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     328.1       397.5|
16.417 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      74.0         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   16547.8     16690.9|
18.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     397.5         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   16690.9     16676.8|
17.250 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       286.4|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   16676.8     16836.0|
17.250 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     286.4         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   16836.0     16828.6|
17.333 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       461.4|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     461.4       453.2|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   16828.6     17070.6|
17.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     453.2         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   17070.6     17057.8|
17.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       193.8|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   17057.8     17110.9|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     193.8         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       116.2|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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                  |
 +-------------------------------------------------------------------------------
-------------------------------------+
```

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	17110.9	17159.6	17.417		
129.00	129.00	Zero Out: Stream #2	116.2	0.0			
129.00	133.00	Convex Routing: Stream #1	17159.6	17146.6	17.500		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1285.6	16.833		
132.00	13305.00	Convex Routing: Stream #2	1285.6	1267.3	17.333		
13305.00	133.00	Convex Routing: Stream #2	1267.3	1254.1	17.583		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	587.0	16.667		
133.00	133.00	Stream #3 Added to: Stream #2	1254.1	1677.4	17.500		
133.00	133.00	Zero Out: Stream #3	587.0	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	17146.6	18823.9	17.500		
133.00	133.00	Zero Out: Stream #2	1677.4	0.0			
133.00	134.00	Convex Routing: Stream #1	18823.9	18804.0	17.667		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	676.2	16.417		
134.00	134.00	Stream #2 Added to: Stream #1	18804.0	19095.4	17.667		
134.00	134.00	Zero Out: Stream #2	676.2	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	1041.4	17.333		
134.00	134.00	Stream #2 Added to: Stream #1	19095.4	20121.1	17.583		
134.00	134.00	Zero Out: Stream #2	1041.4	0.0			
134.00	137.00	Convex Routing: Stream #1	20121.1	20097.7	17.750		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       437.0|
16.500 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   20097.7     20310.2|
17.750 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     437.0         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|   20310.2     20293.8|
17.833 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0       409.5|
16.583 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|   20293.8     20510.9|
17.833 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|     409.5         0.0|
|             |           |
 |   138.00     139.00| Convex Routing:       Stream #1|   20510.9     20502.1|
17.917 |             |           |
 |   138.00     139.00| Subarea (UH) Added to Stream #2|       0.0       200.9|
16.333 |             |           |
 |   139.00     139.00| Stream #2 Added to:   Stream #1|   20502.1     20565.8|
17.917 |             |           |
 |   139.00     139.00| Zero Out:             Stream #2|     200.9         0.0|
|             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   139.00     139.00| View:                 Stream #1|               20565.8|
17.917 |     17375.54|     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                        |
 +-----------------------------------------------------------------------------
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```

END OF FLOODSCx ROUTING ANALYSIS

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

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

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                                *
* ULTIMATE CONDITION - REGIONAL NODE 119                                 *
* 100-YR EV APRIL 2019 FKAZI                                             *
 **************************************************************************

  FILE NAME: EV00119F.DAT
  TIME/DATE OF STUDY: 08:51 04/10/2019


                       ** 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 = 0.376
  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 = 0.345; 30-MINUTE = 0.395;  1-HOUR = 0.435
    3-HOUR = 0.785;    6-HOUR = 0.904; 24-HOUR = 0.944


**************************************************************************
  FLOW PROCESS FROM NODE    119.00 TO NODE    119.00 IS CODE =  11
--------------------------------------------------------------------------
  >>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
==========================================================================
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV00119F.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     20321.2|
18.000 |             |           |
 |   119.00     119.00| View:                  Stream #1|               20321.2|
18.000 |     16050.08|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 126                                *
* 100-YR EV JUNE 2019 ROKAMOTO                                         *
 ************************************************************************

  FILE NAME: EV00126F.DAT
  TIME/DATE OF STUDY: 09:32 06/06/2019


                       ** 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 = 0.376
  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  12603.00 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 =    0.121 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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: [EV00126F.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     20232.3|
18.000 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   20232.3     20078.0|
18.000 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       153.2|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   20078.0     20109.3|
18.000 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     153.2         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   20109.3     20084.9|
18.083 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       351.4|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   20084.9     20175.7|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     351.4         0.0|
|             |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        90.0|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   20175.7     20191.4|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      90.0         0.0|
|             |           |
 |   126.00     126.00| View:                 Stream #1|               20191.4|
18.083 |     16208.59|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 127                                *
* 100-YR EV JUNE 2019 ROKAMOTO                                         *
 ************************************************************************

  FILE NAME: EV00127F.DAT
  TIME/DATE OF STUDY: 14:51 06/11/2019


                       ** 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 = 0.376
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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  12603.00 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 =    0.121 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


**************************************************************************
  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    126.00 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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    600.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.325
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


********************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.164 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.335
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


********************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.288
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.348 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.466
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 24-HOUR = 0.941


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.590
  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 = 0.333; 30-MINUTE = 0.385;  1-HOUR = 0.425
    3-HOUR = 0.775;    6-HOUR = 0.899; 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: [EV00127F.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     20012.1|
18.000 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   20012.1     19861.1|
18.000 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       149.5|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   19861.1     19892.6|
18.000 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     149.5         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   19892.6     19869.6|
18.083 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       342.7|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   19869.6     19961.0|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     342.7         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|   19961.0     19976.8|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      87.4         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   19976.8     19964.0|
18.167 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       210.6|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0       101.2|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     210.6       308.8|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|     101.2         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   19964.0     20042.9|
18.167 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     308.8         0.0|
|            |           |
```

```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   20042.9     19999.4|
18.167 |             |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       416.0|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        96.5|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     416.0       505.7|
16.333 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      96.5         0.0|
|            |          |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   19999.4     20166.8|
18.167 |             |           |
 +--------------------+-----------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     505.7         0.0|
|            |          |
 | 12741.00     127.00| Convex Routing:       Stream #1|   20166.8     20135.1|
18.167 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       378.9|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   20135.1     20250.4|
18.167 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     378.9         0.0|
|            |          |
 +--------------------+-----------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00     127.00| View:                 Stream #1|               20250.4|
18.167 |     16630.12|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133C                              *
* 100-YR EV JUNE 2019 ROKAMOTO                                        *
 ************************************************************************

  FILE NAME: EV0033CF.DAT
  TIME/DATE OF STUDY: 14:50 06/11/2019


                       ** 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 = 0.376
  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  12603.00 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 =    0.121 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.325
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.164 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.335
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.288
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.348 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.466
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.590
  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  12902.00 IS CODE = 5.2
--------------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
================================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
```



```
  WATERSHED AREA =    1120.700 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) =  0.217; LOW LOSS FRACTION = 0.469
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.197 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.591
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.126; LOW LOSS FRACTION = 0.319
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.362
  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: [EV0033CF.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     19376.4|
18.000 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   19376.4     19237.4|
18.000 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       137.5|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   19237.4     19269.8|
18.000 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     137.5         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   19269.8     19251.4|
18.083 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       315.1|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   19251.4     19345.4|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     315.1         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        79.3|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   19345.4     19361.6|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      79.3         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   19361.6     19350.5|
18.167 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       195.7|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        93.4|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     195.7       285.9|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      93.4         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   19350.5     19431.4|
18.167 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     285.9         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   19431.4     19388.0|
18.167 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       387.4|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        89.4|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     387.4       470.6|
16.333 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      89.4         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   19388.0     19559.7|
18.167 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     470.6         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   19559.7     19532.2|
18.250 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       349.1|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   19532.2     19648.0|
18.167 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     349.1         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   19648.0     19638.1|
18.250 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       550.5|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     550.5       541.7|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   19638.1     19900.8|
17.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     541.7         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   19900.8     19883.6|
17.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       238.5|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   19883.6     19949.9|
17.333 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     238.5         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       136.8|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV0033CF.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 |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   19949.9     20010.1|
17.333 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     136.8         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   20010.1     19999.9|
17.417 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1582.0|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1582.0      1534.5|
17.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1534.5      1523.4|
17.500 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       695.4|
16.583 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1523.4      2016.4|
17.417 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     695.4         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   19999.9     22016.3|
17.417 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    2016.4         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|               22016.3|
17.417 |     18111.12|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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             Ver. 20.0  Release Date: 06/01/2013  License ID 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive, Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133T                              *
* 100-YR EV APRIL 2019 FKAZI                                           *
 **************************************************************************

  FILE NAME: EV0033TF.DAT
  TIME/DATE OF STUDY: 08:44 04/10/2019


                       ** 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 = 0.986


**************************************************************************
  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.362
  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 = 0.986


**************************************************************************
  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: [EV0033TF.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 |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      3420.8|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    3420.8      3313.2|
17.083 |             |           |
 | 13305.00     133.00| Convex Routing:       Stream #2|    3313.2      3247.2|
17.250 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0      1501.9|
16.583 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    3247.2      3889.4|
17.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #3|    1501.9         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|       0.0      3889.4|
17.250 |             |           |
 |   133.00     133.00| Zero Out:             Stream #2|    3889.4         0.0|
|             |           |
 |   133.00     133.00| View:                 Stream #1|                3889.4|
17.250 |      1404.44|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 133U                              *
* 100-YR EV JUNE 2019 ROKAMOTO                                        *
 ************************************************************************

  FILE NAME: EV0033UF.DAT
  TIME/DATE OF STUDY: 14:51 06/11/2019


                       ** 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 = 0.376
  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  12603.00 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 =    0.121 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.325
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.164 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.335
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.288
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.348 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.466
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.590
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 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) =  0.217; LOW LOSS FRACTION = 0.469
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.197 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.591
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.126; LOW LOSS FRACTION = 0.319
  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    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: [EV0033UF.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     19871.2|
18.000 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   19871.2     19722.7|
18.000 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       146.9|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   19722.7     19754.4|
18.000 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     146.9         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   19754.4     19732.5|
18.083 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       336.7|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   19732.5     19824.5|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     336.7         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        85.7|
16.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   19824.5     19840.4|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      85.7         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   19840.4     19828.0|
18.167 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       207.4|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        99.5|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     207.4       303.9|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      99.5         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   19828.0     19907.3|
18.167 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     303.9         0.0|
|            |           |
```



```
 | 12720.50   12741.00| Convex Routing:       Stream #1|   19907.3     19863.8|
18.167 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   320.00   12741.00| Subarea (UH) Added to Stream #2|       0.0       409.8|
16.333 |             |           |
 |   390.00   12741.00| Subarea (UH) Added to Stream #4|       0.0        94.9|
16.417 |             |           |
 | 12741.00   12741.00| Stream #4 Added to:   Stream #2|     409.8       498.1|
16.333 |             |           |
 | 12741.00   12741.00| Zero Out:             Stream #4|      94.9         0.0|
|            |           |
 | 12741.00   12741.00| Stream #2 Added to:   Stream #1|   19863.8     20032.2|
18.167 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12741.00   12741.00| Zero Out:             Stream #2|     498.1         0.0|
|            |           |
 | 12741.00     127.00| Convex Routing:       Stream #1|   20032.2     20000.9|
18.167 |             |           |
 | 12710.00     127.00| Subarea (UH) Added to Stream #2|       0.0       372.4|
16.500 |             |           |
 |   127.00     127.00| Stream #2 Added to:   Stream #1|   20000.9     20116.7|
18.167 |             |           |
 |   127.00     127.00| Zero Out:             Stream #2|     372.4         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   127.00   12902.00| Convex Routing:       Stream #1|   20116.7     20105.4|
18.250 |             |           |
 | 50220.00   50347.00| Subarea (UH) Added to Stream #2|       0.0       586.3|
16.333 |             |           |
 | 50347.00   12902.00| Convex Routing:       Stream #2|     586.3       576.8|
16.417 |             |           |
 | 12902.00   12902.00| Stream #2 Added to:   Stream #1|   20105.4     20295.9|
17.333 |             |           |
 | 12902.00   12902.00| Zero Out:             Stream #2|     576.8         0.0|
|            |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12902.00     129.00| Convex Routing:       Stream #1|   20295.9     20279.8|
17.417 |             |           |
 | 50400.00     129.00| Subarea (UH) Added to Stream #2|       0.0       256.5|
16.250 |             |           |
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   20279.8     20340.7|
17.417 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     256.5         0.0|
|            |           |
 |   210.00     129.00| Subarea (UH) Added to Stream #2|       0.0       145.2|
16.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |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: [EV0033UF.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 |
 +-------------------+--------------------------------+----------------------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   20340.7     20394.8|
17.333 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     145.2         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   20394.8     20386.8|
17.417 |             |           |
 |   133.00     133.00| View:                 Stream #1|               20386.8|
17.417 |     16940.93|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 134C                              *
* 100-YR EV JUNE 2019 ROKAMOTO                                        *
 ************************************************************************

  FILE NAME: EV0034CF.DAT
  TIME/DATE OF STUDY: 14:54 06/11/2019


                       ** 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 = 0.376
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12603.00 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 =    0.121 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


**************************************************************************
  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    126.00 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    600.00 TO NODE    126.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.325
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.164 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.335
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.288
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


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



```
  FLOW PROCESS FROM NODE    390.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.348 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.466
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.590
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 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) =  0.217; LOW LOSS FRACTION = 0.469
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


****************************************************************************
  FLOW PROCESS FROM NODE  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.197 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.591
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.126; LOW LOSS FRACTION = 0.319
  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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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    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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    6-HOUR = 0.887; 24-HOUR = 0.933


********************************************************************************
  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.362
 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
   3-HOUR = 0.740;    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) =  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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.311 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.431
 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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
   3-HOUR = 0.740;    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 = 0.293; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.740;    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: [EV0034CF.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     18989.8|
18.000 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   18989.8     18855.9|
18.000 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       130.9|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   18855.9     18888.9|
18.000 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     130.9         0.0|
|            |           |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   18888.9     18873.7|
18.083 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       300.1|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   18873.7     18969.3|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     300.1         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        75.0|
16.333 |             |           |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   18969.3     18985.8|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      75.0         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   18985.8     18975.3|
18.167 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       187.4|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        89.1|
16.250 |             |           |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     187.4       273.7|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      89.1         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   18975.3     19057.5|
18.167 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     273.7         0.0|
|            |           |
```

12720.50	12741.00	Convex Routing:	Stream #1	19057.5	19013.0	18.167
320.00	12741.00	Subarea (UH) Added to Stream #2		0.0	372.3	16.333
390.00	12741.00	Subarea (UH) Added to Stream #4		0.0	85.5	16.417
12741.00	12741.00	Stream #4 Added to:	Stream #2	372.3	452.0	16.333
12741.00	12741.00	Zero Out:	Stream #4	85.5	0.0	
12741.00	12741.00	Stream #2 Added to:	Stream #1	19013.0	19187.6	18.167
12741.00	12741.00	Zero Out:	Stream #2	452.0	0.0	
12741.00	127.00	Convex Routing:	Stream #1	19187.6	19166.0	18.250
12710.00	127.00	Subarea (UH) Added to Stream #2		0.0	332.9	16.500
127.00	127.00	Stream #2 Added to:	Stream #1	19166.0	19311.6	17.250
127.00	127.00	Zero Out:	Stream #2	332.9	0.0	
127.00	12902.00	Convex Routing:	Stream #1	19311.6	19303.2	17.333
50220.00	50347.00	Subarea (UH) Added to Stream #2		0.0	526.0	16.333
50347.00	12902.00	Convex Routing:	Stream #2	526.0	517.5	16.417
12902.00	12902.00	Stream #2 Added to:	Stream #1	19303.2	19588.8	17.333
12902.00	12902.00	Zero Out:	Stream #2	517.5	0.0	
12902.00	129.00	Convex Routing:	Stream #1	19588.8	19580.7	17.333
50400.00	129.00	Subarea (UH) Added to Stream #2		0.0	226.0	16.250
129.00	129.00	Stream #2 Added to:	Stream #1	19580.7	19647.1	17.333
129.00	129.00	Zero Out:	Stream #2	226.0	0.0	
210.00	129.00	Subarea (UH) Added to Stream #2		0.0	131.2	16.250

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: [EV0034CF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   19647.1     19707.3|
17.333 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     131.2         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   19707.3     19695.1|
17.417 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1519.1|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1519.1      1473.9|
17.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1473.9      1464.0|
17.500 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       669.9|
16.583 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1464.0      1950.1|
17.417 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     669.9         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   19695.1     21645.2|
17.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1950.1         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   21645.2     21622.3|
17.583 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       775.0|
16.333 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   21622.3     21965.7|
17.583 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     775.0         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0      1192.1|
17.250 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   21965.7     23136.7|
17.500 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|    1192.1         0.0|
|             |           |
 |   134.00     134.00| View:                 Stream #1|               23136.7|
17.500 |     19179.99|     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
```

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

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

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


  ************************* DESCRIPTION OF STUDY *************************
 * RANCHO MISSION VIEJO - FREE DRAINING UH                              *
 * ULTIMATE CONDITION - REGIONAL NODE 134U                              *
 * 100-YR EV JUNE 2019 ROKAMOTO                                        *
  ************************************************************************

   FILE NAME: EV0034UF.DAT
   TIME/DATE OF STUDY: 14:53 06/11/2019


                         ** 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 = 0.376
   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  12603.00 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 =    0.121 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.325
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.164 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.335
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.288
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.348 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.466
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.590
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 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) =  0.217; LOW LOSS FRACTION = 0.469
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.197 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.591
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.126; LOW LOSS FRACTION = 0.319
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.362
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.311 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.431
  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<<<<<

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

|INPUT FILENAME: [EV0034UF.DAT]

Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	19257.0	18.000		
119.00	12603.00	Convex Routing: Stream #1	19257.0	19120.2	18.000		
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	135.2	16.167		
12603.00	12603.00	Stream #2 Added to: Stream #1	19120.2	19152.7	18.000		
12603.00	12603.00	Zero Out: Stream #2	135.2	0.0			
12603.00	126.00	Convex Routing: Stream #1	19152.7	19135.3	18.083		
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	309.7	16.250		
126.00	126.00	Stream #2 Added to: Stream #1	19135.3	19229.7	18.083		
126.00	126.00	Zero Out: Stream #2	309.7	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	77.7	16.333		
126.00	126.00	Stream #2 Added to: Stream #1	19229.7	19246.0	18.083		
126.00	126.00	Zero Out: Stream #2	77.7	0.0			
126.00	12720.50	Convex Routing: Stream #1	19246.0	19235.3	18.167		
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	192.8	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	91.9	16.250		
12720.50	12720.50	Stream #3 Added to: Stream #2	192.8	281.5	16.250		
12720.50	12720.50	Zero Out: Stream #3	91.9	0.0			
12720.50	12720.50	Stream #2 Added to: Stream #1	19235.3	19316.5	18.167		
12720.50	12720.50	Zero Out: Stream #2	281.5	0.0			

| 12720.50 | 12741.00 | Convex Routing: | Stream #1 | 19316.5 | 19273.3 | 18.167 | | |

| 320.00 | 12741.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 381.9 | 16.333 | | |

| 390.00 | 12741.00 | Subarea (UH) Added to Stream #4 | | 0.0 | 88.0 | 16.417 | | |

| 12741.00 | 12741.00 | Stream #4 Added to: | Stream #2 | 381.9 | 463.8 | 16.333 | | |

| 12741.00 | 12741.00 | Zero Out: | Stream #4 | 88.0 | 0.0 | | | |

| 12741.00 | 12741.00 | Stream #2 Added to: | Stream #1 | 19273.3 | 19445.9 | 18.167 | | |

| 12741.00 | 12741.00 | Zero Out: | Stream #2 | 463.8 | 0.0 | | | |

| 12741.00 | 127.00 | Convex Routing: | Stream #1 | 19445.9 | 19419.6 | 18.250 | | |

| 12710.00 | 127.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 343.4 | 16.500 | | |

| 127.00 | 127.00 | Stream #2 Added to: | Stream #1 | 19419.6 | 19535.1 | 18.167 | | |

| 127.00 | 127.00 | Zero Out: | Stream #2 | 343.4 | 0.0 | | | |

| 127.00 | 12902.00 | Convex Routing: | Stream #1 | 19535.1 | 19525.5 | 18.250 | | |

| 50220.00 | 50347.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 541.6 | 16.333 | | |

| 50347.00 | 12902.00 | Convex Routing: | Stream #2 | 541.6 | 533.0 | 16.417 | | |

| 12902.00 | 12902.00 | Stream #2 Added to: | Stream #1 | 19525.5 | 19808.1 | 17.333 | | |

| 12902.00 | 12902.00 | Zero Out: | Stream #2 | 533.0 | 0.0 | | | |

| 12902.00 | 129.00 | Convex Routing: | Stream #1 | 19808.1 | 19793.7 | 17.333 | | |

| 50400.00 | 129.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 234.1 | 16.250 | | |

| 129.00 | 129.00 | Stream #2 Added to: | Stream #1 | 19793.7 | 19860.1 | 17.333 | | |

| 129.00 | 129.00 | Zero Out: | Stream #2 | 234.1 | 0.0 | | | |

| 210.00 | 129.00 | Subarea (UH) Added to Stream #2 | | 0.0 | 134.7 | 16.250 | | |

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: [EV0034UF.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 |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   19860.1     19920.3|
17.333 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     134.7         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   19920.3     19909.5|
17.417 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1560.8|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1560.8      1514.2|
17.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1514.2      1503.6|
17.500 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       686.7|
16.583 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1503.6      1994.2|
17.417 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     686.7         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   19909.5     21903.7|
17.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1994.2         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   21903.7     21881.0|
17.583 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       797.5|
16.333 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   21881.0     22222.5|
17.583 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     797.5         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   134.00     134.00| View:                 Stream #1|               22222.5|
17.583 |     18431.37|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            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 1264

                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                              *
* ULTIMATE CONDITION - REGIONAL NODE 137                               *
* 100-YR EV JUNE 2019 ROKAMOTO                                        *
 **************************************************************************

  FILE NAME: EV00137F.DAT
  TIME/DATE OF STUDY: 14:49 06/11/2019


                        ** 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 = 0.376
  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  12603.00 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 =    0.121 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.325
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.164 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.335
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.288
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.348 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.466
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.590
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 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) =  0.217; LOW LOSS FRACTION = 0.469
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.197 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.591
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.126; LOW LOSS FRACTION = 0.319
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.362
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.311 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.431
  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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.388 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.420
  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: [EV00137F.DAT]
Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	18908.1	18.000		
119.00	12603.00	Convex Routing: Stream #1	18908.1	18774.8	18.000		
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	129.7	16.167		
12603.00	12603.00	Stream #2 Added to: Stream #1	18774.8	18807.9	18.000		
12603.00	12603.00	Zero Out: Stream #2	129.7	0.0			
12603.00	126.00	Convex Routing: Stream #1	18807.9	18793.4	18.083		
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	297.5	16.250		
126.00	126.00	Stream #2 Added to: Stream #1	18793.4	18889.4	18.083		
126.00	126.00	Zero Out: Stream #2	297.5	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	74.3	16.333		
126.00	126.00	Stream #2 Added to: Stream #1	18889.4	18905.9	18.083		
126.00	126.00	Zero Out: Stream #2	74.3	0.0			
126.00	12720.50	Convex Routing: Stream #1	18905.9	18895.5	18.167		
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	185.9	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	88.4	16.250		
12720.50	12720.50	Stream #3 Added to: Stream #2	185.9	271.6	16.250		
12720.50	12720.50	Zero Out: Stream #3	88.4	0.0			
12720.50	12720.50	Stream #2 Added to: Stream #1	18895.5	18978.0	18.167		
12720.50	12720.50	Zero Out: Stream #2	271.6	0.0			

12720.50	12741.00	Convex Routing: Stream #1	18978.0	18932.7	18.167		
320.00	12741.00	Subarea (UH) Added to Stream #2	0.0	369.8	16.333		
390.00	12741.00	Subarea (UH) Added to Stream #4	0.0	84.8	16.417		
12741.00	12741.00	Stream #4 Added to: Stream #2	369.8	448.9	16.333		
12741.00	12741.00	Zero Out: Stream #4	84.8	0.0			
12741.00	12741.00	Stream #2 Added to: Stream #1	18932.7	19107.9	18.167		
12741.00	12741.00	Zero Out: Stream #2	448.9	0.0			
12741.00	127.00	Convex Routing: Stream #1	19107.9	19088.3	18.250		
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	329.9	16.500		
127.00	127.00	Stream #2 Added to: Stream #1	19088.3	19243.9	17.250		
127.00	127.00	Zero Out: Stream #2	329.9	0.0			
127.00	12902.00	Convex Routing: Stream #1	19243.9	19235.2	17.333		
50220.00	50347.00	Subarea (UH) Added to Stream #2	0.0	521.9	16.333		
50347.00	12902.00	Convex Routing: Stream #2	521.9	513.3	16.417		
12902.00	12902.00	Stream #2 Added to: Stream #1	19235.2	19522.2	17.250		
12902.00	12902.00	Zero Out: Stream #2	513.3	0.0			
12902.00	129.00	Convex Routing: Stream #1	19522.2	19513.7	17.333		
50400.00	129.00	Subarea (UH) Added to Stream #2	0.0	223.8	16.250		
129.00	129.00	Stream #2 Added to: Stream #1	19513.7	19580.2	17.333		
129.00	129.00	Zero Out: Stream #2	223.8	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2	0.0	130.2	16.250		

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

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO MAX. STORAGE PEAK (HR)	MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	19580.2	19640.3	17.333		
129.00	129.00	Zero Out: Stream #2	130.2	0.0			
129.00	133.00	Convex Routing: Stream #1	19640.3	19627.7	17.417		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1507.2	16.833		
132.00	13305.00	Convex Routing: Stream #2	1507.2	1462.4	17.250		
13305.00	133.00	Convex Routing: Stream #2	1462.4	1452.6	17.500		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	665.2	16.583		
133.00	133.00	Stream #3 Added to: Stream #2	1452.6	1937.4	17.417		
133.00	133.00	Zero Out: Stream #3	665.2	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	19627.7	21565.1	17.417		
133.00	133.00	Zero Out: Stream #2	1937.4	0.0			
133.00	134.00	Convex Routing: Stream #1	21565.1	21542.1	17.583		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	769.0	16.333		
134.00	134.00	Stream #2 Added to: Stream #1	21542.1	21886.1	17.583		
134.00	134.00	Zero Out: Stream #2	769.0	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	1185.3	17.250		
134.00	134.00	Stream #2 Added to: Stream #1	21886.1	23052.0	17.500		
134.00	134.00	Zero Out: Stream #2	1185.3	0.0			
134.00	137.00	Convex Routing: Stream #1	23052.0	23031.0	17.667		

```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       500.1|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   23031.0     23280.7|
17.667 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     500.1         0.0|
|             |           |
 |   137.00     137.00| View:                 Stream #1|               23280.7|
17.667 |     19404.88|     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
```

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

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

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 138                                *
* 100-YR EV JUNE 2019 ROKAMOTO                                         *
 ************************************************************************

  FILE NAME: EV00138F.DAT
  TIME/DATE OF STUDY: 14:48 06/11/2019


                       ** 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 = 0.376
  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  12603.00 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 =    0.121 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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    430.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.325
  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    413.00 TO NODE  12720.50 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
============================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.164 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.335
  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  12720.50 TO NODE  12720.50 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
============================================================================
```

```
**************************************************************************
 FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
--------------------------------------------------------------------------
 >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
==========================================================================
 THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
 ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
 (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) =     247.00
 CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
 CONSTANT LOSS RATE(CFS) =    0.00
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
==========================================================================
 WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.288
 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  12741.00 IS CODE =   1
--------------------------------------------------------------------------
 >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
==========================================================================
 WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME =    0.348 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.466
 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  12741.00 TO NODE  12741.00 IS CODE =   7
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
--------------------------------------------------------------------------
 >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
==========================================================================

**************************************************************************
 FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
 CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.590
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 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) =  0.217; LOW LOSS FRACTION = 0.469
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.197 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.591
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.126; LOW LOSS FRACTION = 0.319
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.362
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.311 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.431
  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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.388 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.420
  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) =     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 =    0.501 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: [EV00138F.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     18821.7|
18.000 |             |           |
 |   119.00   12603.00| Convex Routing:       Stream #1|   18821.7     18689.6|
18.000 |             |           |
 |   810.00   12603.00| Subarea (UH) Added to Stream #2|       0.0       128.3|
16.167 |             |           |
 | 12603.00   12603.00| Stream #2 Added to:   Stream #1|   18689.6     18722.8|
18.000 |             |           |
 | 12603.00   12603.00| Zero Out:             Stream #2|     128.3         0.0|
|            |           |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12603.00     126.00| Convex Routing:       Stream #1|   18722.8     18708.6|
18.083 |             |           |
 |   920.00     126.00| Subarea (UH) Added to Stream #2|       0.0       294.6|
16.250 |             |           |
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   18708.6     18805.0|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|     294.6         0.0|
|            |           |
 |   600.00     126.00| Subarea (UH) Added to Stream #2|       0.0        73.5|
16.333 |             |           |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |   126.00     126.00| Stream #2 Added to:   Stream #1|   18805.0     18821.6|
18.083 |             |           |
 |   126.00     126.00| Zero Out:             Stream #2|      73.5         0.0|
|            |           |
 |   126.00   12720.50| Convex Routing:       Stream #1|   18821.6     18811.3|
18.167 |             |           |
 |   430.00   12720.50| Subarea (UH) Added to Stream #2|       0.0       184.2|
16.333 |             |           |
 |   413.00   12720.50| Subarea (UH) Added to Stream #3|       0.0        87.5|
16.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 12720.50   12720.50| Stream #3 Added to:   Stream #2|     184.2       269.3|
16.250 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #3|      87.5         0.0|
|            |           |
 | 12720.50   12720.50| Stream #2 Added to:   Stream #1|   18811.3     18894.1|
18.167 |             |           |
 | 12720.50   12720.50| Zero Out:             Stream #2|     269.3         0.0|
|            |           |
```

12720.50	12741.00	Convex Routing:	Stream #1	18894.1	18849.0	18.167
320.00	12741.00	Subarea (UH) Added to Stream #2		0.0	366.9	16.333
390.00	12741.00	Subarea (UH) Added to Stream #4		0.0	84.0	16.417
12741.00	12741.00	Stream #4 Added to:	Stream #2	366.9	445.4	16.333
12741.00	12741.00	Zero Out:	Stream #4	84.0	0.0	
12741.00	12741.00	Stream #2 Added to:	Stream #1	18849.0	19024.9	18.167
12741.00	12741.00	Zero Out:	Stream #2	445.4	0.0	
12741.00	127.00	Convex Routing:	Stream #1	19024.9	19005.6	18.250
12710.00	127.00	Subarea (UH) Added to Stream #2		0.0	326.6	16.500
127.00	127.00	Stream #2 Added to:	Stream #1	19005.6	19173.0	17.250
127.00	127.00	Zero Out:	Stream #2	326.6	0.0	
127.00	12902.00	Convex Routing:	Stream #1	19173.0	19164.0	17.333
50220.00	50347.00	Subarea (UH) Added to Stream #2		0.0	517.2	16.333
50347.00	12902.00	Convex Routing:	Stream #2	517.2	508.8	16.417
12902.00	12902.00	Stream #2 Added to:	Stream #1	19164.0	19452.7	17.250
12902.00	12902.00	Zero Out:	Stream #2	508.8	0.0	
12902.00	129.00	Convex Routing:	Stream #1	19452.7	19443.6	17.333
50400.00	129.00	Subarea (UH) Added to Stream #2		0.0	221.4	16.250
129.00	129.00	Stream #2 Added to:	Stream #1	19443.6	19510.1	17.333
129.00	129.00	Zero Out:	Stream #2	221.4	0.0	
210.00	129.00	Subarea (UH) Added to Stream #2		0.0	129.2	16.250

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: [EV00138F.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 |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   129.00     129.00| Stream #2 Added to:   Stream #1|   19510.1     19570.2|
17.333 |             |           |
 |   129.00     129.00| Zero Out:             Stream #2|     129.2         0.0|
|             |           |
 |   129.00     133.00| Convex Routing:       Stream #1|   19570.2     19557.1|
17.417 |             |           |
 | 13010.00     132.00| Subarea (UH) Added to Stream #2|       0.0      1494.3|
16.833 |             |           |
 |   132.00   13305.00| Convex Routing:       Stream #2|    1494.3      1450.0|
17.250 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13305.00     133.00| Convex Routing:       Stream #2|    1450.0      1440.2|
17.500 |             |           |
 |   132.00     133.00| Subarea (UH) Added to Stream #3|       0.0       660.0|
16.583 |             |           |
 |   133.00     133.00| Stream #3 Added to:   Stream #2|    1440.2      1923.6|
17.500 |             |           |
 |   133.00     133.00| Zero Out:             Stream #3|     660.0         0.0|
|             |           |
 |   133.00     133.00| Stream #2 Added to:   Stream #1|   19557.1     21480.4|
17.417 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   133.00     133.00| Zero Out:             Stream #2|    1923.6         0.0|
|             |           |
 |   133.00     134.00| Convex Routing:       Stream #1|   21480.4     21457.3|
17.583 |             |           |
 |   133.00     134.00| Subarea (UH) Added to Stream #2|       0.0       762.2|
16.333 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   21457.3     21801.9|
17.583 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|     762.2         0.0|
|             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13500.00     134.00| Subarea (UH) Added to Stream #2|       0.0      1178.1|
17.250 |             |           |
 |   134.00     134.00| Stream #2 Added to:   Stream #1|   21801.9     22963.2|
17.500 |             |           |
 |   134.00     134.00| Zero Out:             Stream #2|    1178.1         0.0|
|             |           |
 |   134.00     137.00| Convex Routing:       Stream #1|   22963.2     22941.9|
17.667 |             |           |
```



```
 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       495.9|
16.417 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   22941.9     23191.9|
17.667 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     495.9         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|   23191.9     23173.6|
17.750 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0       473.5|
16.583 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|   23173.6     23444.1|
17.750 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|     473.5         0.0|
|             |           |
 |   138.00     138.00| View:                 Stream #1|               23444.1|
17.750 |     19637.97|     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
```

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

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2013 Advanced Engineering Software (aes)
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                        Analysis prepared by:

                      Michael Baker International
                    5 Hutton Centre Drive Suite 500
                         Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - FREE DRAINING UH                               *
* ULTIMATE CONDITION - REGIONAL NODE 139                                *
* 100-YR EV JUNE 2019 ROKAMOTO                                         *
 ************************************************************************

  FILE NAME: EV00139F.DAT
  TIME/DATE OF STUDY: 14:47 06/11/2019


                        ** 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 = 0.376
  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  12603.00 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 =    0.121 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  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    126.00 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    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 =     185.300 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) =  0.294; LOW LOSS FRACTION = 0.713
  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    430.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     315.200 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.236 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.146; LOW LOSS FRACTION = 0.325
  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    413.00 TO NODE  12720.50 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #3<<<<<
================================================================================
  WATERSHED AREA =     124.300 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.164 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.138; LOW LOSS FRACTION = 0.335
  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  12720.50 TO NODE  12720.50 IS CODE =   7
--------------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 2<<<<<
================================================================================
```

```
****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 TO NODE  12720.50 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12720.50 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  12741.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     247.00
  CHANNEL LENGTH(FT) =    2294.66      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
  WATERSHED AREA =     675.500 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) =  0.126; LOW LOSS FRACTION = 0.288
  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  12741.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #4<<<<<
============================================================================
  WATERSHED AREA =     195.100 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.348 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.466
  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  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 2<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 TO NODE  12741.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12741.00 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) =     247.00; DOWNSTREAM ELEVATION(FT) =     240.00
  CHANNEL LENGTH(FT) =     819.00      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 =     944.100 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) =  0.296; LOW LOSS FRACTION = 0.590
  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  12902.00 IS CODE = 5.2
----------------------------------------------------------------------------
  >>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
============================================================================
  THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
  ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
  (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) =     215.00
  CHANNEL LENGTH(FT) =    3242.32      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  50220.00 TO NODE  50347.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
============================================================================
```



```
  WATERSHED AREA =    1120.700 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) =  0.217; LOW LOSS FRACTION = 0.469
  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  50347.00 TO NODE  12902.00 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) =   20.00     CHANNEL Z =  5.00
  UPSTREAM ELEVATION(FT) =     313.00; DOWNSTREAM ELEVATION(FT) =     215.00
  CHANNEL LENGTH(FT) =    2700.00      MANNING'S FACTOR = 0.030
  CONSTANT LOSS RATE(CFS) =    0.00
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   7
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 TO NODE  12902.00 IS CODE =   6
----------------------------------------------------------------------------
  >>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
============================================================================


****************************************************************************
  FLOW PROCESS FROM NODE  12902.00 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) =     215.00; DOWNSTREAM ELEVATION(FT) =     213.00
  CHANNEL LENGTH(FT) =    1663.10      MANNING'S FACTOR = 0.030
```

```
  CONSTANT LOSS RATE(CFS) =    0.00
================================================================================


********************************************************************************
  FLOW PROCESS FROM NODE  50400.00 TO NODE    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     420.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.197 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.276; LOW LOSS FRACTION = 0.591
  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    129.00 IS CODE =   1
--------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
================================================================================
  WATERSHED AREA =     214.700 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) =  0.126; LOW LOSS FRACTION = 0.319
  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    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  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 =    1715.900 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) =  0.224; LOW LOSS FRACTION = 0.362
  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,
  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) =     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 =    1691.600 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.311 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.243; LOW LOSS FRACTION = 0.431
  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) =     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 =    1191.900 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    0.388 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.237; LOW LOSS FRACTION = 0.420
  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) =     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 =    0.501 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 = 0.348;  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: [EV00139F.DAT]
Page: 1 of

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	18796.6	18.000		
119.00	12603.00	Convex Routing: Stream #1	18796.6	18665.0	18.000		
810.00	12603.00	Subarea (UH) Added to Stream #2	0.0	127.9	16.167		
12603.00	12603.00	Stream #2 Added to: Stream #1	18665.0	18698.3	18.000		
12603.00	12603.00	Zero Out: Stream #2	127.9	0.0			
12603.00	126.00	Convex Routing: Stream #1	18698.3	18684.2	18.083		
920.00	126.00	Subarea (UH) Added to Stream #2	0.0	293.5	16.250		
126.00	126.00	Stream #2 Added to: Stream #1	18684.2	18780.7	18.083		
126.00	126.00	Zero Out: Stream #2	293.5	0.0			
600.00	126.00	Subarea (UH) Added to Stream #2	0.0	73.2	16.333		
126.00	126.00	Stream #2 Added to: Stream #1	18780.7	18797.4	18.083		
126.00	126.00	Zero Out: Stream #2	73.2	0.0			
126.00	12720.50	Convex Routing: Stream #1	18797.4	18787.1	18.167		
430.00	12720.50	Subarea (UH) Added to Stream #2	0.0	183.6	16.333		
413.00	12720.50	Subarea (UH) Added to Stream #3	0.0	87.2	16.250		
12720.50	12720.50	Stream #3 Added to: Stream #2	183.6	268.4	16.250		
12720.50	12720.50	Zero Out: Stream #3	87.2	0.0			
12720.50	12720.50	Stream #2 Added to: Stream #1	18787.1	18870.0	18.167		
12720.50	12720.50	Zero Out: Stream #2	268.4	0.0			

12720.50	12741.00	Convex Routing: Stream #1	18870.0	18824.8	18.167		
320.00	12741.00	Subarea (UH) Added to Stream #2	0.0	365.9	16.333		
390.00	12741.00	Subarea (UH) Added to Stream #4	0.0	83.7	16.417		
12741.00	12741.00	Stream #4 Added to: Stream #2	365.9	444.1	16.333		
12741.00	12741.00	Zero Out: Stream #4	83.7	0.0			
12741.00	12741.00	Stream #2 Added to: Stream #1	18824.8	19000.9	18.167		
12741.00	12741.00	Zero Out: Stream #2	444.1	0.0			
12741.00	127.00	Convex Routing: Stream #1	19000.9	18982.1	18.250		
12710.00	127.00	Subarea (UH) Added to Stream #2	0.0	325.5	16.500		
127.00	127.00	Stream #2 Added to: Stream #1	18982.1	19152.7	17.250		
127.00	127.00	Zero Out: Stream #2	325.5	0.0			
127.00	12902.00	Convex Routing: Stream #1	19152.7	19143.6	17.333		
50220.00	50347.00	Subarea (UH) Added to Stream #2	0.0	515.5	16.333		
50347.00	12902.00	Convex Routing: Stream #2	515.5	507.0	16.417		
12902.00	12902.00	Stream #2 Added to: Stream #1	19143.6	19432.7	17.250		
12902.00	12902.00	Zero Out: Stream #2	507.0	0.0			
12902.00	129.00	Convex Routing: Stream #1	19432.7	19423.5	17.333		
50400.00	129.00	Subarea (UH) Added to Stream #2	0.0	220.5	16.250		
129.00	129.00	Stream #2 Added to: Stream #1	19423.5	19489.9	17.333		
129.00	129.00	Zero Out: Stream #2	220.5	0.0			
210.00	129.00	Subarea (UH) Added to Stream #2	0.0	128.8	16.250		

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

UPSTREAM NODE #	DOWNSTREAM NODE #	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	TIME(2) TO PEAK (HR)	MAX. STORAGE MODELED (AF)	FOOTNOTES
129.00	129.00	Stream #2 Added to: Stream #1	19489.9	19550.1	17.333		
129.00	129.00	Zero Out: Stream #2	128.8	0.0			
129.00	133.00	Convex Routing: Stream #1	19550.1	19536.9	17.417		
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1490.2	16.833		
132.00	13305.00	Convex Routing: Stream #2	1490.2	1446.1	17.250		
13305.00	133.00	Convex Routing: Stream #2	1446.1	1436.3	17.500		
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	658.3	16.583		
133.00	133.00	Stream #3 Added to: Stream #2	1436.3	1919.4	17.500		
133.00	133.00	Zero Out: Stream #3	658.3	0.0			
133.00	133.00	Stream #2 Added to: Stream #1	19536.9	21455.9	17.417		
133.00	133.00	Zero Out: Stream #2	1919.4	0.0			
133.00	134.00	Convex Routing: Stream #1	21455.9	21432.9	17.583		
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	759.7	16.333		
134.00	134.00	Stream #2 Added to: Stream #1	21432.9	21777.7	17.583		
134.00	134.00	Zero Out: Stream #2	759.7	0.0			
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	1176.0	17.250		
134.00	134.00	Stream #2 Added to: Stream #1	21777.7	22937.3	17.500		
134.00	134.00	Zero Out: Stream #2	1176.0	0.0			
134.00	137.00	Convex Routing: Stream #1	22937.3	22915.9	17.667		

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 |   134.00     137.00| Subarea (UH) Added to Stream #2|       0.0       494.4|
16.417 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   137.00     137.00| Stream #2 Added to:   Stream #1|   22915.9     23166.1|
17.667 |             |           |
 |   137.00     137.00| Zero Out:             Stream #2|     494.4         0.0|
|             |           |
 |   137.00     138.00| Convex Routing:       Stream #1|   23166.1     23147.9|
17.750 |             |           |
 |   137.00     138.00| Subarea (UH) Added to Stream #2|       0.0       472.2|
16.583 |             |           |
 |   138.00     138.00| Stream #2 Added to:   Stream #1|   23147.9     23418.4|
17.750 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   138.00     138.00| Zero Out:             Stream #2|     472.2         0.0|
|             |           |
 |   138.00     139.00| Convex Routing:       Stream #1|   23418.4     23407.5|
17.833 |             |           |
 |   138.00     139.00| Subarea (UH) Added to Stream #2|       0.0       227.3|
16.333 |             |           |
 |   139.00     139.00| Stream #2 Added to:   Stream #1|   23407.5     23488.1|
17.833 |             |           |
 |   139.00     139.00| Zero Out:             Stream #2|     227.3         0.0|
|             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |   139.00     139.00| View:                 Stream #1|               23488.1|
17.833 |     19720.24|     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                        |
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   END OF FLOODSCx ROUTING ANALYSIS
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