

THE RANCH PLAN PLANNED COMMUNITY
PLANNING AREAS 3 AND 4 RUNOFF MANAGEMENT PLAN

Michael Baker
INTERNATIONAL

TECHNICAL APPENDIX D.3

UH Expected Value – Free Draining

FLOOD ROUTING ANALYSIS
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:

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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 119 *
* 2-YR EV DECEMBER 2018 JCLARK *

FILE NAME: EVO2119F.DAT
TIME/DATE OF STUDY: 10:59 12/27/2018

** 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 = 49511.699 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: [EVO2119F.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| 0.0 534.2|
20.417 | | |
| 119.00 119.00| View: Stream #1| 534.2|
20.417 | 552.37| 3 |
+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
+-----+-----+

END OF FLOODSCx ROUTING ANALYSIS

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

RBF Consulting
14257 Alton Parkway
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92618

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 126 *
* 02-YR EV SEPT 2017 ASUN *

FILE NAME: EVO2126F.DAT
TIME/DATE OF STUDY: 15:41 09/22/2017

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	528.5
20.417				
119.00	126.00	Convex Routing: Stream #1	528.5	524.5
20.583				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	3.5
16.500				
126.00	126.00	Stream #2 Added to: Stream #1	524.5	525.0
20.583				
126.00	126.00	Zero Out: Stream #2	3.5	0.0
126.00	126.00	View: Stream #1		525.0
20.583	551.51	3		

| Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

RBF Consulting
14257 Alton Parkway
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92618

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 127 *
* 02-YR EV SEPT 2017 ASUN *

FILE NAME: EVO2127F.DAT
TIME/DATE OF STUDY: 15:38 09/22/2017

** 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 = 49511.699 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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.018 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.588; LOW LOSS FRACTION = 0.972
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941

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

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

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

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

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*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 11

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

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|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV02127F.DAT ]
Page: 1 of 1
-----+-----+-----+
|UPSTREAM DOWNSTREAM|                               |UPSTREAM DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|                               |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS |PEAK (CFS) PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
-----+-----+-----+
| 10100.00  119.00| Subarea (UH) Added to Stream #1|      0.0   515.0|
20.417 |                |                               |
| 119.00    126.00| Convex Routing:      Stream #1|     515.0   512.5|
20.583 |                |                               |
| 119.00    126.00| Subarea (UH) Added to Stream #2|      0.0     3.4|
16.500 |                |                               |
| 126.00    126.00| Stream #2 Added to:  Stream #1|     512.5   513.0|
20.583 |                |                               |
| 126.00    126.00| Zero Out:           Stream #2|      3.4     0.0|
|                |                               |
-----+-----+-----+
| 126.00    127.00| Convex Routing:      Stream #1|     513.0   511.9|
20.833 |                |                               |
| 126.00    127.00| Subarea (UH) Added to Stream #2|      0.0     7.5|
17.083 |                |                               |
| 127.00    127.00| Stream #2 Added to:  Stream #1|     511.9   513.6|
20.833 |                |                               |
| 127.00    127.00| Zero Out:           Stream #2|      7.5     0.0|
|                |                               |
| 127.00    127.00| View:               Stream #1|           513.6|
20.833 | 550.17| 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
|
-----+-----

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END OF FLOODSCx ROUTING ANALYSIS

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Analysis prepared by:

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14257 Alton Parkway
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92618

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 133U *
* 02-YR EV SEPT 2017 ASUN *

FILE NAME: EVO233UF.DAT
TIME/DATE OF STUDY: 13:48 09/25/2017

** 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 = 49511.699 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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.018 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.588; LOW LOSS FRACTION = 0.972
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

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*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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5-MINUTE = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.773 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.583; LOW LOSS FRACTION = 0.962
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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).

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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<<<<<

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+-----+
+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV0233UF.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    514.2|
20.417 | |
| 119.00    126.00| Convex Routing:      Stream #1|    514.2    511.7|
20.583 | |
| 119.00    126.00| Subarea (UH) Added to Stream #2|      0.0     3.4|
16.500 | |
| 126.00    126.00| Stream #2 Added to:  Stream #1|    511.7    512.2|
20.583 | |
| 126.00    126.00| Zero Out:           Stream #2|      3.4     0.0|
| |
+-----+
+-----+
| 126.00    127.00| Convex Routing:      Stream #1|    512.2    511.1|
20.833 | |
| 126.00    127.00| Subarea (UH) Added to Stream #2|      0.0     7.5|
17.083 | |
| 127.00    127.00| Stream #2 Added to:  Stream #1|    511.1    512.8|
20.833 | |
| 127.00    127.00| Zero Out:           Stream #2|      7.5     0.0|
| |
| 127.00    129.00| Convex Routing:      Stream #1|    512.8    512.5|
21.083 | |
+-----+
+-----+
| 50150.00  127.00| Subarea (UH) Added to Stream #2|      0.0     7.7|
16.667 | |
| 127.00    127.00| Stream #2 Added to:  Stream #1|    512.5    513.9|
21.083 | |
| 127.00    127.00| Zero Out:           Stream #2|      7.7     0.0|
| |
| 127.00    129.00| Subarea (UH) Added to Stream #2|      0.0     6.6|
16.833 | |
| 129.00    129.00| Stream #2 Added to:  Stream #1|    513.9    515.1|
21.083 | |
+-----+
+-----+
| 129.00    129.00| Zero Out:           Stream #2|      6.6     0.0|
| |
| 129.00    133.00| Convex Routing:      Stream #1|    515.1    514.7|
21.167 | |
| 133.00    133.00| View:              Stream #1|    514.7|
21.167 | 558.53| 3 |
+-----+
+-----+

```

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

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - UH FREE DRAINING MODEL (NODE 133T) *
* 2-YR EV APRIL 2019 ROKAMOTO *

FILE NAME: EVO233TF.DAT
TIME/DATE OF STUDY: 06:52 04/22/2019

** 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 = 1.263 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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.891 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.600; LOW LOSS FRACTION = 0.949
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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 11

>>>>VIEW STREAM NUMBER 2 HYDROGRAPH<<<<<

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+-----+
|
| * 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| 0.0 345.8|
17.333 | | |
| 132.00 13305.00| Convex Routing: Stream #2| 345.8 332.7|
17.667 | | |
| 13305.00 133.00| Convex Routing: Stream #2| 332.7 323.0|
17.917 | | |
| 132.00 133.00| Subarea (UH) Added to Stream #3| 0.0 123.2|
16.917 | | |
| 133.00 133.00| Stream #3 Added to: Stream #2| 323.0 350.3|
17.917 | | |
+-----+
| 133.00 133.00| Zero Out: Stream #3| 123.2 0.0|
| | | |
| 133.00 133.00| View: Stream #2| 350.3|
17.917 | 135.22| 3 |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
+-----+
+-----+
```

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1264

Analysis prepared by:

RBF Consulting
14257 Alton Parkway
Irvine, CA
92618

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 133C *
* 02-YR EV SEPT 2017 ASUN *

FILE NAME: EV0233CF.DAT
TIME/DATE OF STUDY: 15:46 09/22/2017

** 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 = 49511.699 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.018 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.588; LOW LOSS FRACTION = 0.972
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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5-MINUTE = 0.308; 30-MINUTE = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.773 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.583; LOW LOSS FRACTION = 0.962
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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).

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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 = 1.263 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.891 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.600; LOW LOSS FRACTION = 0.949
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	509.0
20.417				
119.00	126.00	Convex Routing: Stream #1	509.0	506.8
20.583				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	3.2
16.500				
126.00	126.00	Stream #2 Added to: Stream #1	506.8	507.3
20.583				
126.00	126.00	Zero Out: Stream #2	3.2	0.0
126.00	127.00	Convex Routing: Stream #1	507.3	506.4
20.833				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	7.3
17.083				
127.00	127.00	Stream #2 Added to: Stream #1	506.4	508.0
20.833				
127.00	127.00	Zero Out: Stream #2	7.3	0.0
127.00	129.00	Convex Routing: Stream #1	508.0	507.7
21.083				
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	7.4
16.667				
127.00	127.00	Stream #2 Added to: Stream #1	507.7	509.0
21.083				
127.00	127.00	Zero Out: Stream #2	7.4	0.0
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	6.4
16.833				
129.00	129.00	Stream #2 Added to: Stream #1	509.0	510.3
21.083				
129.00	129.00	Zero Out: Stream #2	6.4	0.0
129.00	133.00	Convex Routing: Stream #1	510.3	510.0
21.167				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	134.4
17.333				
132.00	13305.00	Convex Routing: Stream #2	134.4	132.8
17.917				

13305.00	133.00	Convex Routing: Stream #2	132.8	132.3
18.250				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	18.8
16.917				
133.00	133.00	Stream #3 Added to: Stream #2	132.3	145.4
18.083				
133.00	133.00	Zero Out: Stream #3	18.8	0.0
133.00	133.00	Stream #2 Added to: Stream #1	510.0	567.5
19.667				
133.00	133.00	Zero Out: Stream #2	145.4	0.0
133.00	133.00	View: Stream #1		567.5
19.667	662.78	3		

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

END OF FLOODSCx ROUTING ANALYSIS

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

RBF Consulting
14257 Alton Parkway
Irvine, CA
92618

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 134U *
* 02-YR EV SEPT 2017 ASUN *

FILE NAME: EVO234UF.DAT
TIME/DATE OF STUDY: 15:43 09/22/2017

** 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 = 49511.699 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.018 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.588; LOW LOSS FRACTION = 0.972
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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5-MINUTE = 0.304; 30-MINUTE = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.773 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.583; LOW LOSS FRACTION = 0.962
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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).

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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 = 1.263 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.891 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.600; LOW LOSS FRACTION = 0.949
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.988 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.597; LOW LOSS FRACTION = 0.968
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

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

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

Table with columns: TIME (2) TO, UPSTREAM, DOWNSTREAM, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), FOOTNOTES. Includes summary header and detailed data rows for various stream processes.

13305.00	133.00	Convex Routing:	Stream #2	132.2	131.6
18.250					
+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	18.7
16.917					
133.00	133.00	Stream #3 Added to: Stream #2		131.6	144.7
18.083					
133.00	133.00	Zero Out:	Stream #3	18.7	0.0
133.00	133.00	Stream #2 Added to: Stream #1		509.3	567.3
19.667					
133.00	133.00	Zero Out:	Stream #2	144.7	0.0
+-----+					
133.00	134.00	Convex Routing:	Stream #1	567.3	566.9
19.917					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	6.6
17.000					
134.00	134.00	Stream #2 Added to: Stream #1		566.9	568.8
19.917					
134.00	134.00	Zero Out:	Stream #2	6.6	0.0
134.00	134.00	View:	Stream #1		568.8
19.917	666.83	3			
+-----+					
+-----+					
+-----+					
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT					
INTERVAL					
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF					
THE DESIGN STORM					
+-----+					
+-----+					

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1264

Analysis prepared by:

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5 Hutton Centre Drive, Suite 500
Santa Ana, CA
92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 134C *
* 2-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EVO234CF.DAT
TIME/DATE OF STUDY: 10:39 07/23/2018

** 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 = 49511.699 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 119.00 TO NODE 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

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

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

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

FLOW PROCESS FROM NODE 126.00 TO NODE 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

```

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.018 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.588; LOW LOSS FRACTION = 0.972
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.773 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.583; LOW LOSS FRACTION = 0.962
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 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).

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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 = 1.263 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 132.00 TO NODE 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.891 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.600; LOW LOSS FRACTION = 0.949
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

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

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

FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH (FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 212.00; DOWNSTREAM ELEVATION (FT) = 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.988 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.597; LOW LOSS FRACTION = 0.968
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.080 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.935
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [EV0234CF.DAT]

Page: 1 of 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	505.3
20.417				
119.00	126.00	Convex Routing: Stream #1	505.3	503.3
20.583				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	3.1
16.500				
126.00	126.00	Stream #2 Added to: Stream #1	503.3	503.9
20.583				
126.00	126.00	Zero Out: Stream #2	3.1	0.0
126.00	127.00	Convex Routing: Stream #1	503.9	503.0
20.833				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	7.1
17.083				
127.00	127.00	Stream #2 Added to: Stream #1	503.0	504.7
20.833				
127.00	127.00	Zero Out: Stream #2	7.1	0.0
127.00	129.00	Convex Routing: Stream #1	504.7	504.3
21.083				
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	7.2
16.667				
127.00	127.00	Stream #2 Added to: Stream #1	504.3	505.7
21.083				
127.00	127.00	Zero Out: Stream #2	7.2	0.0
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	6.2
16.833				
129.00	129.00	Stream #2 Added to: Stream #1	505.7	506.9
21.083				
129.00	129.00	Zero Out: Stream #2	6.2	0.0
129.00	133.00	Convex Routing: Stream #1	506.9	506.7
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	18.4
17.083				
133.00	133.00	Stream #3 Added to: Stream #2	129.6	142.6
18.083				
133.00	133.00	Zero Out: Stream #3	18.4	0.0
133.00	133.00	Stream #2 Added to: Stream #1	506.7	566.0
19.667				
133.00	133.00	Zero Out: Stream #2	142.6	0.0
133.00	134.00	Convex Routing: Stream #1	566.0	565.6
19.917				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	6.4
17.000				
134.00	134.00	Stream #2 Added to: Stream #1	565.6	567.5
19.917				
134.00	134.00	Zero Out: Stream #2	6.4	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	35.7
18.083				
134.00	134.00	Stream #2 Added to: Stream #1	567.5	599.6
19.583				
134.00	134.00	Zero Out: Stream #2	35.7	0.0
134.00	134.00	View: Stream #1		599.6
19.583	694.89	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 137 *
* 2-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EVO2137F.DAT
TIME/DATE OF STUDY: 10:38 07/23/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.018 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.588; LOW LOSS FRACTION = 0.972
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 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.773 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.583; LOW LOSS FRACTION = 0.962
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).

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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 = 1.263 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.891 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.600; LOW LOSS FRACTION = 0.949
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.988 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.597; LOW LOSS FRACTION = 0.968
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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.080 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.935
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 = 1238.800 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) = 0.560; LOW LOSS FRACTION = 0.895
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<<<<

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FLOW PROCESS FROM NODE 137.00 TO NODE 137.00 IS CODE = 11

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

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| * AES FLOODSCx PROGRAM RESULTS SUMMARY *

| INPUT FILENAME: [EV02137F.DAT]

Page: 1 of |

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UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	504.4
20.417				
119.00	126.00	Convex Routing: Stream #1	504.4	502.4
20.583				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	3.1
16.500				
126.00	126.00	Stream #2 Added to: Stream #1	502.4	503.0
20.583				
126.00	126.00	Zero Out: Stream #2	3.1	0.0
126.00	127.00	Convex Routing: Stream #1	503.0	502.2
20.833				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	7.1
17.083				
127.00	127.00	Stream #2 Added to: Stream #1	502.2	503.8
20.833				
127.00	127.00	Zero Out: Stream #2	7.1	0.0
127.00	129.00	Convex Routing: Stream #1	503.8	503.5
21.083				
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	7.1
16.667				
127.00	127.00	Stream #2 Added to: Stream #1	503.5	504.8
21.083				
127.00	127.00	Zero Out: Stream #2	7.1	0.0
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	6.2
16.833				
129.00	129.00	Stream #2 Added to: Stream #1	504.8	506.1
21.083				
129.00	129.00	Zero Out: Stream #2	6.2	0.0
129.00	133.00	Convex Routing: Stream #1	506.1	505.9
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	18.3
17.083					
133.00	133.00	Stream #3 Added to:	Stream #2	129.0	141.9
18.083					
133.00	133.00	Zero Out:	Stream #3	18.3	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	505.9	565.4
19.667					
133.00	133.00	Zero Out:	Stream #2	141.9	0.0
+-----+-----+					
133.00	134.00	Convex Routing:	Stream #1	565.4	565.0
19.917					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	6.4
17.000					
134.00	134.00	Stream #2 Added to:	Stream #1	565.0	566.9
19.917					
134.00	134.00	Zero Out:	Stream #2	6.4	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2		0.0	35.6
18.083					
+-----+-----+					
134.00	134.00	Stream #2 Added to:	Stream #1	566.9	598.9
19.583					
134.00	134.00	Zero Out:	Stream #2	35.6	0.0
134.00	137.00	Convex Routing:	Stream #1	598.9	598.6
19.750					
134.00	137.00	Subarea (UH) Added to Stream #2		0.0	23.3
16.583					
137.00	137.00	Stream #2 Added to:	Stream #1	598.6	604.0
19.750					
+-----+-----+					
137.00	137.00	Zero Out:	Stream #2	23.3	0.0
137.00	137.00	View:	Stream #1		604.0
19.750	708.87	3			
+-----+-----+					
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL					
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM					
+-----+-----+					

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 138 *
* 2-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EVO2138F.DAT
TIME/DATE OF STUDY: 10:35 07/23/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.018 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.588; LOW LOSS FRACTION = 0.972
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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

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*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.773 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.583; LOW LOSS FRACTION = 0.962
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).

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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 = 1.263 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.891 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.600; LOW LOSS FRACTION = 0.949
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.988 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.597; LOW LOSS FRACTION = 0.968
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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.080 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.935
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 = 1238.800 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) = 0.560; LOW LOSS FRACTION = 0.895
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 = 1332.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.939 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.529; LOW LOSS FRACTION = 0.850
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 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	503.5
20.417				
119.00	126.00	Convex Routing: Stream #1	503.5	501.5
20.583				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	3.1
16.500				
126.00	126.00	Stream #2 Added to: Stream #1	501.5	502.1
20.583				
126.00	126.00	Zero Out: Stream #2	3.1	0.0
126.00	127.00	Convex Routing: Stream #1	502.1	501.3
20.833				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	7.0
17.083				
127.00	127.00	Stream #2 Added to: Stream #1	501.3	503.0
20.833				
127.00	127.00	Zero Out: Stream #2	7.0	0.0
127.00	129.00	Convex Routing: Stream #1	503.0	502.6
21.083				
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	7.1
16.667				
127.00	127.00	Stream #2 Added to: Stream #1	502.6	504.0
21.083				
127.00	127.00	Zero Out: Stream #2	7.1	0.0
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	6.1
16.833				
129.00	129.00	Stream #2 Added to: Stream #1	504.0	505.3
21.083				
129.00	129.00	Zero Out: Stream #2	6.1	0.0
129.00	133.00	Convex Routing: Stream #1	505.3	505.0
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	128.8
17.917				

13305.00	133.00	Convex Routing: Stream #2	128.8	128.3
18.250				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	18.2
17.083				
133.00	133.00	Stream #3 Added to: Stream #2	128.3	141.3
18.083				
133.00	133.00	Zero Out: Stream #3	18.2	0.0
133.00	133.00	Stream #2 Added to: Stream #1	505.0	565.0
19.667				
133.00	133.00	Zero Out: Stream #2	141.3	0.0
133.00	134.00	Convex Routing: Stream #1	565.0	564.7
19.917				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	6.4
17.000				
134.00	134.00	Stream #2 Added to: Stream #1	564.7	566.5
19.917				
134.00	134.00	Zero Out: Stream #2	6.4	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	35.5
18.083				
134.00	134.00	Stream #2 Added to: Stream #1	566.5	598.4
19.583				
134.00	134.00	Zero Out: Stream #2	35.5	0.0
134.00	137.00	Convex Routing: Stream #1	598.4	598.1
19.750				
134.00	137.00	Subarea (UH) Added to Stream #2	0.0	23.1
16.583				
137.00	137.00	Stream #2 Added to: Stream #1	598.1	603.5
19.750				
137.00	137.00	Zero Out: Stream #2	23.1	0.0
137.00	138.00	Convex Routing: Stream #1	603.5	603.2
20.000				
137.00	138.00	Subarea (UH) Added to Stream #2	0.0	32.4
17.000				
138.00	138.00	Stream #2 Added to: Stream #1	603.2	612.2
19.917				
138.00	138.00	Zero Out: Stream #2	32.4	0.0

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

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|
| * 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 |
-----+-----+-----+-----+
| 138.00 138.00| View: Stream #1| 612.2|
19.917 | 730.63| 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 |
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END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
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 *
* EXISTING CONDITION - REGIONAL NODE 139 *
* 2-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EVO2139F.DAT
TIME/DATE OF STUDY: 10:33 07/23/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.594; LOW LOSS FRACTION = 0.984
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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


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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.018 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.588; LOW LOSS FRACTION = 0.972
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 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.589 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.962
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.13; 30-MINUTE = 0.28; 1-HOUR = 0.37
3-HOUR = 0.62; 6-HOUR = 0.85; 24-HOUR = 1.44
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.773 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.583; LOW LOSS FRACTION = 0.962
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).

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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 = 1.263 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.891 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.600; LOW LOSS FRACTION = 0.949
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.988 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.597; LOW LOSS FRACTION = 0.968
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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.080 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.589; LOW LOSS FRACTION = 0.935
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 = 1238.800 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) = 0.560; LOW LOSS FRACTION = 0.895
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 = 1332.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.939 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.529; LOW LOSS FRACTION = 0.850
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 = 427.800 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) = 0.413; 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]

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UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	503.2
20.417					
119.00	126.00		Convex Routing: Stream #1	503.2	501.3
20.583					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	3.1
16.500					
126.00	126.00		Stream #2 Added to: Stream #1	501.3	501.9
20.583					
126.00	126.00		Zero Out: Stream #2	3.1	0.0
126.00	127.00		Convex Routing: Stream #1	501.9	501.1
20.833					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	7.0
17.083					
127.00	127.00		Stream #2 Added to: Stream #1	501.1	502.8
20.833					
127.00	127.00		Zero Out: Stream #2	7.0	0.0
127.00	129.00		Convex Routing: Stream #1	502.8	502.4
21.083					
50150.00	127.00		Subarea (UH) Added to Stream #2	0.0	7.1
16.667					
127.00	127.00		Stream #2 Added to: Stream #1	502.4	503.8
21.083					
127.00	127.00		Zero Out: Stream #2	7.1	0.0
127.00	129.00		Subarea (UH) Added to Stream #2	0.0	6.1
16.833					
129.00	129.00		Stream #2 Added to: Stream #1	503.8	505.0
21.083					
129.00	129.00		Zero Out: Stream #2	6.1	0.0
129.00	133.00		Convex Routing: Stream #1	505.0	504.8
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	18.1
17.083					
133.00	133.00		Stream #3 Added to: Stream #2	128.2	141.1
18.083					
133.00	133.00		Zero Out: Stream #3	18.1	0.0
133.00	133.00		Stream #2 Added to: Stream #1	504.8	564.9
19.667					
133.00	133.00		Zero Out: Stream #2	141.1	0.0
133.00	134.00		Convex Routing: Stream #1	564.9	564.5
19.917					
133.00	134.00		Subarea (UH) Added to Stream #2	0.0	6.4
17.000					
134.00	134.00		Stream #2 Added to: Stream #1	564.5	566.4
19.917					
134.00	134.00		Zero Out: Stream #2	6.4	0.0
13500.00	134.00		Subarea (UH) Added to Stream #2	0.0	35.4
18.083					
134.00	134.00		Stream #2 Added to: Stream #1	566.4	598.3
19.583					
134.00	134.00		Zero Out: Stream #2	35.4	0.0
134.00	137.00		Convex Routing: Stream #1	598.3	597.9
19.750					
134.00	137.00		Subarea (UH) Added to Stream #2	0.0	23.1
16.583					
137.00	137.00		Stream #2 Added to: Stream #1	597.9	603.3
19.750					
137.00	137.00		Zero Out: Stream #2	23.1	0.0
137.00	138.00		Convex Routing: Stream #1	603.3	603.0
20.000					
137.00	138.00		Subarea (UH) Added to Stream #2	0.0	32.4
17.000					
138.00	138.00		Stream #2 Added to: Stream #1	603.0	612.0
19.917					
138.00	138.00		Zero Out: Stream #2	32.4	0.0

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

FLOOD ROUTING ANALYSIS
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 Center Drive, Suite 500
Santa Ana, CA
92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 119 *
* 5-YR EV DECEMBER 2018 JCLARK *

FILE NAME: EV05119F.DAT
TIME/DATE OF STUDY: 11:01 12/27/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 126.00 TO NODE 126.00 IS CODE = 11

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

-----+
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
| INPUT FILENAME: [EV05119F.DAT]
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+-----+-----+
|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 2403.4|
19.333 | | |
| 126.00 126.00| View: Stream #1| 2403.4|
19.333 | 1927.54| 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 |
+-----+-----+

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
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Analysis prepared by:

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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 126 *
* 5-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV05126F.DAT
TIME/DATE OF STUDY: 10:14 07/23/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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]

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UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #			
PEAK (HR)	MODELED (AF)	FOOTNOTES		

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	2386.2
19.333				
119.00	126.00	Convex Routing: Stream #1	2386.2	2343.2
19.500				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	60.8
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	2343.2	2346.2
19.500				
126.00	126.00	Zero Out: Stream #2	60.8	0.0

126.00	126.00	View: Stream #1		2346.2
19.500	1932.87	3		

| Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 127 *
* 5-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV05127F.DAT
TIME/DATE OF STUDY: 10:16 07/23/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

```
=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.658 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.934
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 31400.00 TO NODE 127.00 IS CODE = 1
-----
```

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

```
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.447 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.41; 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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #			
PEAK (HR)	MODELED (AF)	FOOTNOTES		

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	2342.1
19.333				
119.00	126.00	Convex Routing: Stream #1	2342.1	2302.3
19.500				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	56.4
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	2302.3	2305.3
19.500				
126.00	126.00	Zero Out: Stream #2	56.4	0.0

126.00	127.00	Convex Routing: Stream #1	2305.3	2302.5
19.667				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	58.4
16.750				
127.00	127.00	Stream #2 Added to: Stream #1	2302.5	2309.0
19.667				
127.00	127.00	Zero Out: Stream #2	58.4	0.0
31400.00	127.00	Subarea (UH) Added to Stream #2	0.0	55.7
16.500				

127.00	127.00	Stream #2 Added to: Stream #1	2309.0	2314.4
19.667				
127.00	127.00	Zero Out: Stream #2	55.7	0.0
127.00	127.00	View: Stream #1		2314.4
19.667	1956.64	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 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 *
* EXISTING CONDITION - REGIONAL NODE 133U *
* 05-YR EV JULY 2017 ROKAMOTO *

FILE NAME: EV0533UF.DAT
TIME/DATE OF STUDY: 10:16 07/23/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

```
=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.658 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.934
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 31400.00 TO NODE 127.00 IS CODE = 1
-----
```

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

```
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.447 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.41; 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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
```

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

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
```

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

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
```

```
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
```

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

```
ASSUMED REGULAR CHANNEL INFORMATION:
```

```
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
```

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

```
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.551 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.486; LOW LOSS FRACTION = 0.923
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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<<<<<

Table with columns: TIME(2) TO, NODE #, MODELED (AF), FOOTNOTES, PEAK (CFS), PEAK (CFS). Rows include hydrologic/hydraulic processes like 'Subarea (UH) Added to Stream #1', 'Convex Routing', and 'Zero Out'.

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

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

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 133T *
* 5-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV0533TF.DAT
TIME/DATE OF STUDY: 11:09 12/27/2018

** 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 = 0.987 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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.684 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.500; LOW LOSS FRACTION = 0.882
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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 11

>>>>VIEW STREAM NUMBER 2 HYDROGRAPH<<<<<

=====

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+-----+
|
| * 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| 0.0 760.3|
17.000 | | |
| 132.00 13305.00| Convex Routing: Stream #2| 760.3 721.3|
17.333 | | |
| 13305.00 133.00| Convex Routing: Stream #2| 721.3 709.0|
17.667 | | |
| 132.00 133.00| Subarea (UH) Added to Stream #3| 0.0 340.3|
16.750 | | |
| 133.00 133.00| Stream #3 Added to: Stream #2| 709.0 785.5|
17.583 | | |
+-----+
| 133.00 133.00| Zero Out: Stream #3| 340.3 0.0|
| | | |
| 133.00 133.00| View: Stream #2| 785.5|
17.583 | 270.55| 3 |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
+-----+
+-----+
```

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 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 *
* EXISTING CONDITION - REGIONAL NODE 133C *
* 5-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV0533CF.DAT
TIME/DATE OF STUDY: 09:37 07/26/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

```
=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.658 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.934
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 31400.00 TO NODE 127.00 IS CODE = 1
-----
```

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

```
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.447 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.41; 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
```

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

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
```

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

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
```

```
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
```

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

```
ASSUMED REGULAR CHANNEL INFORMATION:
```

```
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
```

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

```
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.551 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.486; LOW LOSS FRACTION = 0.923
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 0.987 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.684 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.500; LOW LOSS FRACTION = 0.882
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	2231.5
19.333				
119.00	126.00	Convex Routing: Stream #1	2231.5	2202.8
19.250				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	45.0
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	2202.8	2206.0
19.250				
126.00	126.00	Zero Out: Stream #2	45.0	0.0

126.00	127.00	Convex Routing: Stream #1	2206.0	2200.2
19.667				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	48.9
16.750				
127.00	127.00	Stream #2 Added to: Stream #1	2200.2	2206.8
19.667				
127.00	127.00	Zero Out: Stream #2	48.9	0.0
31400.00	127.00	Subarea (UH) Added to Stream #2	0.0	46.1
16.500				

127.00	127.00	Stream #2 Added to: Stream #1	2206.8	2212.1
19.667				
127.00	127.00	Zero Out: Stream #2	46.1	0.0
127.00	129.00	Convex Routing: Stream #1	2212.1	2209.7
19.750				
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	36.3
16.583				
129.00	129.00	Stream #2 Added to: Stream #1	2209.7	2214.2
19.750				

129.00	129.00	Zero Out: Stream #2	36.3	0.0
129.00	133.00	Convex Routing: Stream #1	2214.2	2211.3
19.833				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	300.3
17.000				
132.00	13305.00	Convex Routing: Stream #2	300.3	292.8
17.500				

13305.00	133.00	Convex Routing: Stream #2	292.8	291.3
17.833				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	88.2
16.750				
133.00	133.00	Stream #3 Added to: Stream #2	291.3	340.3
17.750				
133.00	133.00	Zero Out: Stream #3	88.2	0.0
133.00	133.00	Stream #2 Added to: Stream #1	2211.3	2411.8
18.750				
133.00	133.00	Zero Out: Stream #2	340.3	0.0

133.00	133.00	View: Stream #1	2411.8	
18.750	2160.27	3		

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

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 134U *
* 5-YR EV DECEMBER 2018 JCLARK *

FILE NAME: EV0534UF.DAT
TIME/DATE OF STUDY: 11:11 12/27/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.658 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.934
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.447 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.41; 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.551 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.486; LOW LOSS FRACTION = 0.923
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 0.987 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.684 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.500; LOW LOSS FRACTION = 0.882
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.632 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.498; LOW LOSS FRACTION = 0.910
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

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

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

Table with columns: TIME (2) TO, UPSTREAM, DOWNSTREAM, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), FOOTNOTES. Includes summary header: * AES FLOODSCx PROGRAM RESULTS SUMMARY * and input filename: [EV0534UF.DAT].

13305.00	133.00	Convex Routing:	Stream #2	289.3	287.9
17.833					
+-----+-----+-----+-----+-----+					
132.00	133.00	Subarea (UH) Added to	Stream #3	0.0	86.1
16.750					
133.00	133.00	Stream #3 Added to:	Stream #2	287.9	336.9
17.750					
133.00	133.00	Zero Out:	Stream #3	86.1	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	2197.0	2400.7
18.750					
133.00	133.00	Zero Out:	Stream #2	336.9	0.0
+-----+-----+-----+-----+-----+					
133.00	134.00	Convex Routing:	Stream #1	2400.7	2399.0
18.917					
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	43.7
16.667					
134.00	134.00	Stream #2 Added to:	Stream #1	2399.0	2409.4
18.667					
134.00	134.00	Zero Out:	Stream #2	43.7	0.0
134.00	134.00	View:	Stream #1		2409.4
18.667	2175.01	3			

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 134C *
* 5-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV0534CF.DAT
TIME/DATE OF STUDY: 10:21 07/23/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 119.00 TO NODE 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

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

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

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

FLOW PROCESS FROM NODE 126.00 TO NODE 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.658 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.934
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.447 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.41; 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.551 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.486; LOW LOSS FRACTION = 0.923
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7

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

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 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 = 0.987 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 132.00 TO NODE 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) = 312.00
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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.684 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.500; LOW LOSS FRACTION = 0.882
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

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

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

FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH (FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION (FT) = 212.00; DOWNSTREAM ELEVATION (FT) = 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.632 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.498; LOW LOSS FRACTION = 0.910
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.274 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.869
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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [EV0534CF.DAT]

Page: 1 of 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	2165.1
19.333				
119.00	126.00	Convex Routing: Stream #1	2165.1	2144.3
19.250				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	38.3
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	2144.3	2147.4
19.250				
126.00	126.00	Zero Out: Stream #2	38.3	0.0

126.00	127.00	Convex Routing: Stream #1	2147.4	2139.0
19.667				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	43.4
16.750				
127.00	127.00	Stream #2 Added to: Stream #1	2139.0	2145.5
19.667				
127.00	127.00	Zero Out: Stream #2	43.4	0.0
31400.00	127.00	Subarea (UH) Added to Stream #2	0.0	40.5
16.500				

127.00	127.00	Stream #2 Added to: Stream #1	2145.5	2150.9
19.667				
127.00	127.00	Zero Out: Stream #2	40.5	0.0
127.00	129.00	Convex Routing: Stream #1	2150.9	2149.8
19.750				
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	32.1
16.583				
129.00	129.00	Stream #2 Added to: Stream #1	2149.8	2154.3
19.750				

129.00	129.00	Zero Out: Stream #2	32.1	0.0
129.00	133.00	Convex Routing: Stream #1	2154.3	2151.9
19.833				
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	278.7
17.583				

13305.00	133.00	Convex Routing: Stream #2	278.7	269.8
18.250				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	79.9
16.750				
133.00	133.00	Stream #3 Added to: Stream #2	269.8	310.0
18.250				
133.00	133.00	Zero Out: Stream #3	79.9	0.0
133.00	133.00	Stream #2 Added to: Stream #1	2151.9	2403.8
18.750				
133.00	133.00	Zero Out: Stream #2	310.0	0.0

133.00	134.00	Convex Routing: Stream #1	2403.8	2402.3
19.000				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	40.1
16.667				
134.00	134.00	Stream #2 Added to: Stream #1	2402.3	2411.5
19.000				
134.00	134.00	Zero Out: Stream #2	40.1	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	122.1
17.917				

134.00	134.00	Stream #2 Added to: Stream #1	2411.5	2524.7
18.667				
134.00	134.00	Zero Out: Stream #2	122.1	0.0
134.00	134.00	View: Stream #1		2524.7
18.667	2249.33	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 137 *
* 5-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV05137F.DAT
TIME/DATE OF STUDY: 09:35 07/26/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.658 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.934
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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.447 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.41; 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 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.551 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.486; LOW LOSS FRACTION = 0.923
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 = 0.987 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.684 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.500; LOW LOSS FRACTION = 0.882
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.632 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.498; LOW LOSS FRACTION = 0.910
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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.274 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.869
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.425 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.466; LOW LOSS FRACTION = 0.831
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

13305.00	133.00	Convex Routing:	Stream #2	275.6	274.2
17.833					
+-----+-----+					
132.00	133.00	Subarea (UH) Added to	Stream #3	0.0	78.1
16.750					
133.00	133.00	Stream #3 Added to:	Stream #2	274.2	322.7
17.750					
133.00	133.00	Zero Out:	Stream #3	78.1	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	2138.8	2354.2
18.750					
133.00	133.00	Zero Out:	Stream #2	322.7	0.0
+-----+-----+					
133.00	134.00	Convex Routing:	Stream #1	2354.2	2352.9
18.917					
133.00	134.00	Subarea (UH) Added to	Stream #2	0.0	39.0
16.667					
134.00	134.00	Stream #2 Added to:	Stream #1	2352.9	2364.7
18.667					
134.00	134.00	Zero Out:	Stream #2	39.0	0.0
13500.00	134.00	Subarea (UH) Added to	Stream #2	0.0	120.9
17.917					
+-----+-----+					
134.00	134.00	Stream #2 Added to:	Stream #1	2364.7	2482.9
18.667					
134.00	134.00	Zero Out:	Stream #2	120.9	0.0
134.00	137.00	Convex Routing:	Stream #1	2482.9	2480.0
18.833					
134.00	137.00	Subarea (UH) Added to	Stream #2	0.0	70.5
16.500					
137.00	137.00	Stream #2 Added to:	Stream #1	2480.0	2495.7
18.833					
+-----+-----+					
137.00	137.00	Zero Out:	Stream #2	70.5	0.0
137.00	137.00	View:	Stream #1		2495.7
18.833	2279.31	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

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

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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 138 *
* 5-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV05138F.DAT
TIME/DATE OF STUDY: 09:34 07/26/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

```
=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.658 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.934
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 31400.00 TO NODE 127.00 IS CODE = 1
-----
```

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

```
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.447 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.41; 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 129.00 IS CODE = 5.2
-----
```

```
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
```

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

```
ASSUMED REGULAR CHANNEL INFORMATION:
```

```
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
```

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

```
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.551 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.486; LOW LOSS FRACTION = 0.923
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 = 0.987 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.684 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.500; LOW LOSS FRACTION = 0.882
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.632 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.498; LOW LOSS FRACTION = 0.910
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 10100.00 TO NODE 134.00 IS CODE = 1

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.274 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.869
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.425 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.466; LOW LOSS FRACTION = 0.831
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) = 4643.66 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 = 1332.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.608 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.441; LOW LOSS FRACTION = 0.783
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 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	2134.2
19.333					
119.00	126.00		Convex Routing: Stream #1	2134.2	2117.3
19.250					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	35.2
16.417					
126.00	126.00		Stream #2 Added to: Stream #1	2117.3	2120.5
19.250					
126.00	126.00		Zero Out: Stream #2	35.2	0.0
126.00	127.00		Convex Routing: Stream #1	2120.5	2111.1
19.500					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	40.9
16.750					
127.00	127.00		Stream #2 Added to: Stream #1	2111.1	2117.9
19.500					
127.00	127.00		Zero Out: Stream #2	40.9	0.0
31400.00	127.00		Subarea (UH) Added to Stream #2	0.0	38.0
16.500					
127.00	127.00		Stream #2 Added to: Stream #1	2117.9	2123.5
19.500					
127.00	127.00		Zero Out: Stream #2	38.0	0.0
127.00	129.00		Convex Routing: Stream #1	2123.5	2122.1
19.750					
127.00	129.00		Subarea (UH) Added to Stream #2	0.0	30.3
16.583					
129.00	129.00		Stream #2 Added to: Stream #1	2122.1	2126.6
19.750					
129.00	129.00		Zero Out: Stream #2	30.3	0.0
129.00	133.00		Convex Routing: Stream #1	2126.6	2125.0
19.750					
13010.00	132.00		Subarea (UH) Added to Stream #2	0.0	277.9
17.000					
132.00	13305.00		Convex Routing: Stream #2	277.9	272.3
17.583					

13305.00	133.00		Convex Routing: Stream #2	272.3	271.0
17.833					
132.00	133.00		Subarea (UH) Added to Stream #3	0.0	76.1
16.750					
133.00	133.00		Stream #3 Added to: Stream #2	271.0	319.3
17.750					
133.00	133.00		Zero Out: Stream #3	76.1	0.0
133.00	133.00		Stream #2 Added to: Stream #1	2125.0	2343.1
18.417					
133.00	133.00		Zero Out: Stream #2	319.3	0.0
133.00	134.00		Convex Routing: Stream #1	2343.1	2341.8
18.917					
133.00	134.00		Subarea (UH) Added to Stream #2	0.0	37.9
16.667					
134.00	134.00		Stream #2 Added to: Stream #1	2341.8	2353.9
18.667					
134.00	134.00		Zero Out: Stream #2	37.9	0.0
10100.00	134.00		Subarea (UH) Added to Stream #2	0.0	119.7
17.917					
134.00	134.00		Stream #2 Added to: Stream #1	2353.9	2470.9
18.667					
134.00	134.00		Zero Out: Stream #2	119.7	0.0
134.00	137.00		Convex Routing: Stream #1	2470.9	2468.0
18.833					
134.00	137.00		Subarea (UH) Added to Stream #2	0.0	68.8
16.500					
137.00	137.00		Stream #2 Added to: Stream #1	2468.0	2483.8
18.833					
137.00	137.00		Zero Out: Stream #2	68.8	0.0
137.00	138.00		Convex Routing: Stream #1	2483.8	2481.5
19.000					
137.00	138.00		Subarea (UH) Added to Stream #2	0.0	81.1
16.667					
138.00	138.00		Stream #2 Added to: Stream #1	2481.5	2504.9
19.000					
138.00	138.00		Zero Out: Stream #2	81.1	0.0

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

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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 |
-----+-----+
| 138.00 138.00| View: Stream #1| 2504.9|
19.000 | 2322.03| 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

FLOOD ROUTING ANALYSIS
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 *
* EXISTING CONDITION - REGIONAL NODE 139 *
* 05-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV05139F.DAT
TIME/DATE OF STUDY: 09:33 07/26/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 3.317 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.335 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.495; LOW LOSS FRACTION = 0.950
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.658 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.490; LOW LOSS FRACTION = 0.934
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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.447 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.915
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.18; 30-MINUTE = 0.41; 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 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 0.01 CHANNEL Z = 3.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.551 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.486; LOW LOSS FRACTION = 0.923
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 = 0.987 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.684 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.500; LOW LOSS FRACTION = 0.882
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.632 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.498; LOW LOSS FRACTION = 0.910
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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.274 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.491; LOW LOSS FRACTION = 0.869
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.425 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.466; LOW LOSS FRACTION = 0.831
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

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>>>>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) =    4643.66    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 =    1332.600 ACRES; BASEFLOW =    0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME =    0.608 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =    0.441; LOW LOSS FRACTION = 0.783
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<<<<
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THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) =    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 =    427.800 ACRES; BASEFLOW =    0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME =    0.277 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<<<<
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* AES FLOODSCx PROGRAM RESULTS SUMMARY *

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UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
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10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	2129.4
19.333				
119.00	126.00	Convex Routing: Stream #1	2129.4	2113.1
19.250				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	34.7
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	2113.1	2116.3
19.250				
126.00	126.00	Zero Out: Stream #2	34.7	0.0
126.00	127.00	Convex Routing: Stream #1	2116.3	2106.9
19.500				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	40.5
16.750				
127.00	127.00	Stream #2 Added to: Stream #1	2106.9	2113.8
19.500				
127.00	127.00	Zero Out: Stream #2	40.5	0.0
31400.00	127.00	Subarea (UH) Added to Stream #2	0.0	37.6
16.500				
127.00	127.00	Stream #2 Added to: Stream #1	2113.8	2119.3
19.500				
127.00	127.00	Zero Out: Stream #2	37.6	0.0
127.00	129.00	Convex Routing: Stream #1	2119.3	2117.8
19.750				
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	30.0
16.583				
129.00	129.00	Stream #2 Added to: Stream #1	2117.8	2122.3
19.750				
129.00	129.00	Zero Out: Stream #2	30.0	0.0
129.00	133.00	Convex Routing: Stream #1	2122.3	2120.8
19.750				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	276.8
17.000				
132.00	13305.00	Convex Routing: Stream #2	276.8	271.3
17.583				

13305.00	133.00	Convex Routing: Stream #2	271.3	270.0
17.833				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	75.5
16.750				
133.00	133.00	Stream #3 Added to: Stream #2	270.0	318.3
17.750				
133.00	133.00	Zero Out: Stream #3	75.5	0.0
133.00	133.00	Stream #2 Added to: Stream #1	2120.8	2339.7
18.417				
133.00	133.00	Zero Out: Stream #2	318.3	0.0
133.00	134.00	Convex Routing: Stream #1	2339.7	2338.4
18.917				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	37.6
16.667				
134.00	134.00	Stream #2 Added to: Stream #1	2338.4	2350.6
18.667				
134.00	134.00	Zero Out: Stream #2	37.6	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	119.3
17.917				
134.00	134.00	Stream #2 Added to: Stream #1	2350.6	2467.2
18.667				
134.00	134.00	Zero Out: Stream #2	119.3	0.0
134.00	137.00	Convex Routing: Stream #1	2467.2	2464.3
18.833				
134.00	137.00	Subarea (UH) Added to Stream #2	0.0	68.3
16.500				
137.00	137.00	Stream #2 Added to: Stream #1	2464.3	2480.1
18.833				
137.00	137.00	Zero Out: Stream #2	68.3	0.0
137.00	138.00	Convex Routing: Stream #1	2480.1	2477.9
19.000				
137.00	138.00	Subarea (UH) Added to Stream #2	0.0	80.7
16.667				
138.00	138.00	Stream #2 Added to: Stream #1	2477.9	2501.2
19.000				
138.00	138.00	Zero Out: Stream #2	80.7	0.0

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

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|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV05139F.DAT ]
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|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+
| 138.00 139.00| Convex Routing: Stream #1| 2501.2 2500.7|
19.083 | | |
| 138.00 139.00| Subarea (UH) Added to Stream #2| 0.0 57.6|
16.333 | | |
| 139.00 139.00| Stream #2 Added to: Stream #1| 2500.7 2511.6|
19.083 | | |
| 139.00 139.00| Zero Out: Stream #2| 57.6 0.0|
| | | |
| 139.00 139.00| View: Stream #1| 2511.6|
19.083 | 2348.29| 3 |
-----+-----+
-----+-----+
-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
-----+-----+

```

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 119 *
* 10-YR EV DECEMBER 2018 JCLARK *

FILE NAME: EV10119F.DAT
TIME/DATE OF STUDY: 11:03 12/27/2018

** 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 = 49511.699 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 7237.7|
18.333 | | |
| 119.00 119.00| View: Stream #1| 7237.7|
18.333 | 4889.40| 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

FLOOD ROUTING ANALYSIS
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Analysis prepared by:

Michael Baker International
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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 126 *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV10126F.DAT
TIME/DATE OF STUDY: 11:24 07/23/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	7176.0
18.333				
119.00	126.00	Convex Routing: Stream #1	7176.0	7131.4
18.500				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	222.2
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	7131.4	7145.2
18.500				
126.00	126.00	Zero Out: Stream #2	222.2	0.0
126.00	126.00	View: Stream #1		7145.2
18.500	4907.56	3		

| Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
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Analysis prepared by:

Michael Baker International
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***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 127 *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV10127F.DAT
TIME/DATE OF STUDY: 11:24 07/23/2018

** 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 = 49511.699 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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 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) = 0.294; LOW LOSS FRACTION = 0.872
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 1

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

10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	7016.8
18.333					
119.00	126.00		Convex Routing: Stream #1	7016.8	6976.2
18.500					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	213.2
16.417					
126.00	126.00		Stream #2 Added to: Stream #1	6976.2	6990.0
18.500					
126.00	126.00		Zero Out: Stream #2	213.2	0.0

126.00	127.00		Convex Routing: Stream #1	6990.0	6941.1
18.667					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	229.2
16.583					
127.00	127.00		Stream #2 Added to: Stream #1	6941.1	6969.8
18.667					
127.00	127.00		Zero Out: Stream #2	229.2	0.0
31400.00	127.00		Subarea (UH) Added to Stream #2	0.0	203.1
16.417					

127.00	127.00		Stream #2 Added to: Stream #1	6969.8	6989.5
18.667					
127.00	127.00		Zero Out: Stream #2	203.1	0.0
127.00	127.00		View: Stream #1		6989.5
18.667	4968.10	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

FLOOD ROUTING ANALYSIS
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Analysis prepared by:

Michael Baker International
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Santa Ana, CA
92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 133U *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV1033UF.DAT
TIME/DATE OF STUDY: 11:24 07/23/2018

** 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 = 49511.699 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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 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) = 0.294; LOW LOSS FRACTION = 0.872
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.492 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.860
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 |
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+-----+
|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    6963.5|
18.333 |
| 119.00    126.00| Convex Routing:      Stream #1|  6963.5    6923.3|
18.500 |
| 119.00    126.00| Subarea (UH) Added to Stream #2|      0.0    210.4|
16.417 |
| 126.00    126.00| Stream #2 Added to:  Stream #1|  6923.3    6937.0|
18.500 |
| 126.00    126.00| Zero Out:           Stream #2|  210.4     0.0|
|
+-----+
+-----+
| 126.00    127.00| Convex Routing:      Stream #1|  6937.0    6887.8|
18.667 |
| 126.00    127.00| Subarea (UH) Added to Stream #2|      0.0    226.1|
16.583 |
| 127.00    127.00| Stream #2 Added to:  Stream #1|  6887.8    6916.6|
18.667 |
| 127.00    127.00| Zero Out:           Stream #2|  226.1     0.0|
|
| 31400.00  127.00| Subarea (UH) Added to Stream #2|      0.0    200.4|
16.417 |
+-----+
+-----+
| 127.00    127.00| Stream #2 Added to:  Stream #1|  6916.6    6936.2|
18.667 |
| 127.00    127.00| Zero Out:           Stream #2|  200.4     0.0|
|
| 127.00    129.00| Convex Routing:      Stream #1|  6936.2    6913.5|
18.833 |
| 127.00    129.00| Subarea (UH) Added to Stream #2|      0.0    155.3|
16.583 |
| 129.00    129.00| Stream #2 Added to:  Stream #1|  6913.5    6929.0|
18.833 |
+-----+
+-----+
| 129.00    129.00| Zero Out:           Stream #2|  155.3     0.0|
|
| 129.00    133.00| Convex Routing:      Stream #1|  6929.0    6914.1|
18.917 |
| 133.00    133.00| View:              Stream #1|  6914.1|
18.917 | 4990.34| 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 |

+-----+
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END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 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 *
* EXISTING CONDITION - REGIONAL NODE 133T *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV1033TF.DAT
TIME/DATE OF STUDY: 14:42 07/26/2018

** 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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.795
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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 11

>>>>VIEW STREAM NUMBER 2 HYDROGRAPH<<<<

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|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV1033TF.DAT ]
Page: 1 of |
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|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 1699.5|
17.000 | |
| 132.00 13305.00| Convex Routing: Stream #2| 1699.5 1627.6|
17.333 | |
| 13305.00 133.00| Convex Routing: Stream #2| 1627.6 1598.3|
17.583 | |
| 132.00 133.00| Subarea (UH) Added to Stream #3| 0.0 885.9|
16.667 | |
| 133.00 133.00| Stream #3 Added to: Stream #2| 1598.3 1781.3|
17.500 | |
+-----+
| 133.00 133.00| Zero Out: Stream #3| 885.9 0.0|
| |
| 133.00 133.00| View: Stream #2| 1781.3|
17.500 | 569.80| 3 |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
+-----+
```

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 133C *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV1033CF.DAT
TIME/DATE OF STUDY: 11:23 07/23/2018

** 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 = 49511.699 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 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) = 0.294; LOW LOSS FRACTION = 0.872
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.492 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.860
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.795
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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]

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UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE		UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #	HYDROLOGIC/HYDRAULIC PROCESS		
PEAK (HR)	MODELED (AF)	FOOTNOTES		

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	6596.9
18.333				
119.00	126.00	Convex Routing: Stream #1	6596.9	6563.5
18.500				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	190.6
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	6563.5	6577.4
18.500				
126.00	126.00	Zero Out: Stream #2	190.6	0.0
126.00	127.00	Convex Routing: Stream #1	6577.4	6525.1
18.667				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	205.1
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	6525.1	6554.2
18.667				
127.00	127.00	Zero Out: Stream #2	205.1	0.0
31400.00	127.00	Subarea (UH) Added to Stream #2	0.0	181.4
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	6554.2	6573.9
18.667				
127.00	127.00	Zero Out: Stream #2	181.4	0.0
127.00	129.00	Convex Routing: Stream #1	6573.9	6554.5
18.833				
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	141.4
16.583				
129.00	129.00	Stream #2 Added to: Stream #1	6554.5	6570.1
18.833				
129.00	129.00	Zero Out: Stream #2	141.4	0.0
129.00	133.00	Convex Routing: Stream #1	6570.1	6557.2
18.917				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	691.7
17.000				
132.00	13305.00	Convex Routing: Stream #2	691.7	662.1
17.417				

13305.00	133.00	Convex Routing: Stream #2	662.1	655.0
17.833				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	303.2
16.667				
133.00	133.00	Stream #3 Added to: Stream #2	655.0	775.6
17.750				
133.00	133.00	Zero Out: Stream #3	303.2	0.0
133.00	133.00	Stream #2 Added to: Stream #1	6557.2	7171.9
17.917				
133.00	133.00	Zero Out: Stream #2	775.6	0.0
133.00	133.00	View: Stream #1		7171.9
17.917	5340.13	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 134U *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV1034UF.DAT
TIME/DATE OF STUDY: 11:23 07/23/2018

** 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 = 49511.699 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 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) = 0.294; LOW LOSS FRACTION = 0.872
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.492 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.860
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.795
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.529 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.829
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

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

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

Table with columns: TIME(2) TO, MAX. STORAGE, UPSTREAM, DOWNSTREAM, PEAK (CFS), PEAK (CFS). Rows include hydrologic/hydraulic process details like 'Subarea (UH) Added to Stream #1', 'Convex Routing', and 'Zero Out'.

13305.00	133.00	Convex Routing:	Stream #2	654.6	647.9
17.833					
+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	299.0
16.667					
133.00	133.00	Stream #3 Added to:	Stream #2	647.9	767.5
17.750					
133.00	133.00	Zero Out:	Stream #3	299.0	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	6498.8	7114.0
17.917					
133.00	133.00	Zero Out:	Stream #2	767.5	0.0
+-----+					
133.00	134.00	Convex Routing:	Stream #1	7114.0	7102.9
18.167					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	177.1
16.583					
134.00	134.00	Stream #2 Added to:	Stream #1	7102.9	7147.6
18.167					
134.00	134.00	Zero Out:	Stream #2	177.1	0.0
134.00	134.00	View:	Stream #1		7147.6
18.167	5378.35	3			

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 134C *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV1034CF.DAT
TIME/DATE OF STUDY: 09:11 07/26/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.320 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.746
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.33; 30-MINUTE = 0.63; 1-HOUR = 0.88
3-HOUR = 1.65; 6-HOUR = 2.45; 24-HOUR = 4.32
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 119.00 TO NODE 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

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

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

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

FLOW PROCESS FROM NODE 126.00 TO NODE 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 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) = 0.294; LOW LOSS FRACTION = 0.872
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.492 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.860
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7

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

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 129.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 213.00; DOWNSTREAM ELEVATION(FT) = 212.00
CHANNEL LENGTH(FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

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

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

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.938 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.727
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 132.00 TO NODE 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.795
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

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

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

FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.529 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.829
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 10100.00 TO NODE 134.00 IS CODE = 1

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.487 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.784
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [EV1034CF.DAT]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	6347.6
18.333					
119.00	126.00		Convex Routing: Stream #1	6347.6	6319.4
18.500					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	178.1
16.417					
126.00	126.00		Stream #2 Added to: Stream #1	6319.4	6333.3
18.500					
126.00	126.00		Zero Out: Stream #2	178.1	0.0
126.00	127.00		Convex Routing: Stream #1	6333.3	6277.8
18.667					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	192.2
16.583					
127.00	127.00		Stream #2 Added to: Stream #1	6277.8	6307.1
18.667					
127.00	127.00		Zero Out: Stream #2	192.2	0.0
31400.00	127.00		Subarea (UH) Added to Stream #2	0.0	170.6
16.417					
127.00	127.00		Stream #2 Added to: Stream #1	6307.1	6326.8
18.667					
127.00	127.00		Zero Out: Stream #2	170.6	0.0
127.00	129.00		Convex Routing: Stream #1	6326.8	6309.5
18.833					
127.00	129.00		Subarea (UH) Added to Stream #2	0.0	132.7
16.583					
129.00	129.00		Stream #2 Added to: Stream #1	6309.5	6325.1
18.833					
129.00	129.00		Zero Out: Stream #2	132.7	0.0
129.00	133.00		Convex Routing: Stream #1	6325.1	6313.4
18.917					
13010.00	132.00		Subarea (UH) Added to Stream #2	0.0	662.1
17.000					
132.00	13305.00		Convex Routing: Stream #2	662.1	634.2
17.417					

13305.00	133.00		Convex Routing: Stream #2	634.2	628.2
17.833					
132.00	133.00		Subarea (UH) Added to Stream #3	0.0	287.2
16.667					
133.00	133.00		Stream #3 Added to: Stream #2	628.2	747.0
17.750					
133.00	133.00		Zero Out: Stream #3	287.2	0.0
133.00	133.00		Stream #2 Added to: Stream #1	6313.4	6928.1
17.917					
133.00	133.00		Zero Out: Stream #2	747.0	0.0
133.00	134.00		Convex Routing: Stream #1	6928.1	6917.1
18.167					
133.00	134.00		Subarea (UH) Added to Stream #2	0.0	169.6
16.583					
134.00	134.00		Stream #2 Added to: Stream #1	6917.1	6962.3
18.167					
134.00	134.00		Zero Out: Stream #2	169.6	0.0
10100.00	134.00		Subarea (UH) Added to Stream #2	0.0	388.8
17.500					
134.00	134.00		Stream #2 Added to: Stream #1	6962.3	7274.9
18.083					
134.00	134.00		Zero Out: Stream #2	388.8	0.0
134.00	134.00		View: Stream #1		7274.9
18.083	5543.58	3			

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 137 *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV10137F.DAT
TIME/DATE OF STUDY: 09:09 07/26/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 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) = 0.294; LOW LOSS FRACTION = 0.872
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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.492 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.860
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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.795
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) = 6461.32 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.529 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.829
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 10100.00 TO NODE 134.00 IS CODE = 1

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.487 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.784
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.419 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.751
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

13305.00	133.00	Convex Routing:	Stream #2	628.8	622.7
17.833					
+-----+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	284.0
16.667					
133.00	133.00	Stream #3 Added to: Stream #2		622.7	741.0
17.750					
133.00	133.00	Zero Out:	Stream #3	284.0	0.0
133.00	133.00	Stream #2 Added to: Stream #1		6258.7	6872.7
17.917					
133.00	133.00	Zero Out:	Stream #2	741.0	0.0
+-----+-----+					
133.00	134.00	Convex Routing:	Stream #1	6872.7	6862.0
18.167					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	167.6
16.583					
134.00	134.00	Stream #2 Added to: Stream #1		6862.0	6907.2
18.167					
134.00	134.00	Zero Out:	Stream #2	167.6	0.0
10100.00	134.00	Subarea (UH) Added to Stream #2		0.0	385.6
17.500					
+-----+-----+					
134.00	134.00	Stream #2 Added to: Stream #1		6907.2	7217.5
18.083					
134.00	134.00	Zero Out:	Stream #2	385.6	0.0
134.00	137.00	Convex Routing:	Stream #1	7217.5	7210.9
18.333					
134.00	137.00	Subarea (UH) Added to Stream #2		0.0	217.8
16.500					
137.00	137.00	Stream #2 Added to: Stream #1		7210.9	7266.7
18.333					
+-----+-----+					
137.00	137.00	Zero Out:	Stream #2	217.8	0.0
137.00	137.00	View:	Stream #1		7266.7
18.333	5602.87	3			
+-----+-----+					
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL					
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM					
+-----+-----+					

END OF FLOODSCx ROUTING ANALYSIS

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

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Santa Ana, CA
92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 138 *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV10138F.DAT
TIME/DATE OF STUDY: 09:13 07/26/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 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) = 0.294; LOW LOSS FRACTION = 0.872
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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.492 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.860
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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.795
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.529 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.829
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 10100.00 TO NODE 134.00 IS CODE = 1

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.487 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.784
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.419 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.751
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 = 1332.600 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) = 0.265; 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 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]

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UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	6234.5
18.333				
119.00	126.00	Convex Routing: Stream #1	6234.5	6207.7
18.500				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	172.9
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	6207.7	6221.6
18.500				
126.00	126.00	Zero Out: Stream #2	172.9	0.0
126.00	127.00	Convex Routing: Stream #1	6221.6	6165.2
18.667				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	187.1
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	6165.2	6194.6
18.667				
127.00	127.00	Zero Out: Stream #2	187.1	0.0
31400.00	127.00	Subarea (UH) Added to Stream #2	0.0	166.1
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	6194.6	6214.4
18.667				
127.00	127.00	Zero Out: Stream #2	166.1	0.0
127.00	129.00	Convex Routing: Stream #1	6214.4	6197.7
18.833				
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	129.1
16.583				
129.00	129.00	Stream #2 Added to: Stream #1	6197.7	6213.2
18.833				
129.00	129.00	Zero Out: Stream #2	129.1	0.0
129.00	133.00	Convex Routing: Stream #1	6213.2	6202.0
18.917				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	649.9
17.000				
132.00	13305.00	Convex Routing: Stream #2	649.9	622.9
17.417				

13305.00	133.00	Convex Routing: Stream #2	622.9	617.0
17.833				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	280.4
16.667				
133.00	133.00	Stream #3 Added to: Stream #2	617.0	735.7
17.750				
133.00	133.00	Zero Out: Stream #3	280.4	0.0
133.00	133.00	Stream #2 Added to: Stream #1	6202.0	6814.4
17.917				
133.00	133.00	Zero Out: Stream #2	735.7	0.0
133.00	134.00	Convex Routing: Stream #1	6814.4	6803.7
18.167				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	165.3
16.583				
134.00	134.00	Stream #2 Added to: Stream #1	6803.7	6849.1
18.167				
134.00	134.00	Zero Out: Stream #2	165.3	0.0
10100.00	134.00	Subarea (UH) Added to Stream #2	0.0	382.2
17.500				
134.00	134.00	Stream #2 Added to: Stream #1	6849.1	7158.4
18.083				
134.00	134.00	Zero Out: Stream #2	382.2	0.0
134.00	137.00	Convex Routing: Stream #1	7158.4	7151.4
18.333				
134.00	137.00	Subarea (UH) Added to Stream #2	0.0	215.0
16.500				
137.00	137.00	Stream #2 Added to: Stream #1	7151.4	7207.5
18.333				
137.00	137.00	Zero Out: Stream #2	215.0	0.0
137.00	138.00	Convex Routing: Stream #1	7207.5	7200.4
18.500				
137.00	138.00	Subarea (UH) Added to Stream #2	0.0	214.1
16.583				
138.00	138.00	Stream #2 Added to: Stream #1	7200.4	7269.8
18.500				
138.00	138.00	Zero Out: Stream #2	214.1	0.0

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

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| * 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 |
-----+-----+-----+-----+
| 138.00 138.00 | View: Stream #1 | 7269.8 |
18.500 | 5682.01 | 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

FLOOD ROUTING ANALYSIS
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 *
* EXISTING CONDITION - REGIONAL NODE 139 *
* 10-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV10139F.DAT
TIME/DATE OF STUDY: 08:55 07/26/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.312 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.888
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 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) = 0.294; LOW LOSS FRACTION = 0.872
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 31400.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.841
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.26; 30-MINUTE = 0.59; 1-HOUR = 0.78
3-HOUR = 1.31; 6-HOUR = 1.81; 24-HOUR = 3.03
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.492 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.860
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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.622 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.795
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.529 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.829
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 10100.00 TO NODE 134.00 IS CODE = 1

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.487 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.784
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.419 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.751
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) = 4643.66 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 = 1332.600 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) = 0.265; 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 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 = 427.800 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 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	6216.8
18.333				
119.00	126.00	Convex Routing: Stream #1	6216.8	6190.4
18.500				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	172.0
16.417				
126.00	126.00	Stream #2 Added to: Stream #1	6190.4	6204.3
18.500				
126.00	126.00	Zero Out: Stream #2	172.0	0.0
126.00	127.00	Convex Routing: Stream #1	6204.3	6147.4
18.667				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	186.2
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	6147.4	6176.9
18.667				
127.00	127.00	Zero Out: Stream #2	186.2	0.0
31400.00	127.00	Subarea (UH) Added to Stream #2	0.0	165.3
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	6176.9	6196.7
18.667				
127.00	127.00	Zero Out: Stream #2	165.3	0.0
127.00	129.00	Convex Routing: Stream #1	6196.7	6180.0
18.833				
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	128.5
16.583				
129.00	129.00	Stream #2 Added to: Stream #1	6180.0	6195.6
18.833				
129.00	129.00	Zero Out: Stream #2	128.5	0.0
129.00	133.00	Convex Routing: Stream #1	6195.6	6184.5
18.917				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	647.8
17.000				
132.00	13305.00	Convex Routing: Stream #2	647.8	620.8
17.417				

13305.00	133.00	Convex Routing: Stream #2	620.8	615.1
17.833				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	279.3
16.667				
133.00	133.00	Stream #3 Added to: Stream #2	615.1	733.3
17.750				
133.00	133.00	Zero Out: Stream #3	279.3	0.0
133.00	133.00	Stream #2 Added to: Stream #1	6184.5	6796.8
17.917				
133.00	133.00	Zero Out: Stream #2	733.3	0.0
133.00	134.00	Convex Routing: Stream #1	6796.8	6786.2
18.167				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	164.6
16.583				
134.00	134.00	Stream #2 Added to: Stream #1	6786.2	6831.7
18.167				
134.00	134.00	Zero Out: Stream #2	164.6	0.0
10100.00	134.00	Subarea (UH) Added to Stream #2	0.0	381.1
17.500				
134.00	134.00	Stream #2 Added to: Stream #1	6831.7	7139.9
18.083				
134.00	134.00	Zero Out: Stream #2	381.1	0.0
134.00	137.00	Convex Routing: Stream #1	7139.9	7133.2
18.333				
134.00	137.00	Subarea (UH) Added to Stream #2	0.0	214.1
16.500				
137.00	137.00	Stream #2 Added to: Stream #1	7133.2	7189.3
18.333				
137.00	137.00	Zero Out: Stream #2	214.1	0.0
137.00	138.00	Convex Routing: Stream #1	7189.3	7182.2
18.500				
137.00	138.00	Subarea (UH) Added to Stream #2	0.0	213.3
16.583				
138.00	138.00	Stream #2 Added to: Stream #1	7182.2	7251.6
18.500				
138.00	138.00	Zero Out: Stream #2	213.3	0.0

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

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| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV10139F.DAT ]
Page: 2 of |
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|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS) |
PEAK (HR) | MODELED (AF) | FOOTNOTES |
-----+-----+
| 138.00 139.00| Convex Routing: Stream #1| 7251.6 7249.2|
18.583 | | |
| 138.00 139.00| Subarea (UH) Added to Stream #2| 0.0 127.4|
16.333 | | |
| 139.00 139.00| Stream #2 Added to: Stream #1| 7249.2 7270.2|
18.583 | | |
| 139.00 139.00| Zero Out: Stream #2| 127.4 0.0|
| | | |
| 139.00 139.00| View: Stream #1| 7270.2|
18.583 | 5723.71| 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 |
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END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1264

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 119 *
* 25-YR EV DECEMBER 2018 JCLARK *

FILE NAME: EV25119F.DAT
TIME/DATE OF STUDY: 11:04 12/27/2018

** 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 = 49511.699 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<<<<

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| * 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 14939.3|
18.167 | | |
| 119.00 119.00| View: Stream #1| 14939.3|
18.167 | 11851.42| 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 *
* EXISTING CONDITION - REGIONAL NODE 126 *
* 25-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV25126F.DAT
TIME/DATE OF STUDY: 14:14 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	14867.5
18.167				
119.00	126.00	Convex Routing: Stream #1	14867.5	14785.6
18.250				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	383.3
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	14785.6	14865.7
18.250				
126.00	126.00	Zero Out: Stream #2	383.3	0.0
126.00	126.00	View: Stream #1		14865.7
18.250	11954.61	3		

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

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 127 *
* 25-YR EV DECEMBER 2018 JCLARK *

FILE NAME: EV25127F.DAT
TIME/DATE OF STUDY: 11:14 12/27/2018

** 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 = 49511.699 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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.527 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.601
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 50150.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #	HYDROLOGIC/HYDRAULIC PROCESS	PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES	

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	14684.8
18.167				
119.00	126.00	Convex Routing: Stream #1	14684.8	14605.8
18.250				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	371.4
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	14605.8	14686.5
18.250				
126.00	126.00	Zero Out: Stream #2	371.4	0.0

126.00	127.00	Convex Routing: Stream #1	14686.5	14651.7
18.417				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	436.8
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	14651.7	14785.1
18.417				
127.00	127.00	Zero Out: Stream #2	436.8	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	367.1
16.417				

127.00	127.00	Stream #2 Added to: Stream #1	14785.1	14872.3
18.417				
127.00	127.00	Zero Out: Stream #2	367.1	0.0
127.00	127.00	View: Stream #1		14872.3
18.417	12248.40	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

FLOOD ROUTING ANALYSIS
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 *
* EXISTING CONDITION - REGIONAL NODE 133U *
* 25-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV2533UF.DAT
TIME/DATE OF STUDY: 08:21 07/20/2018

** 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 = 49511.699 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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

```
=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.527 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.601
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
```

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

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
```

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

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

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

```
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940
=====
```

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
```

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

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
```

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

```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
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```

```
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
```

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

```
ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====
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```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
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```

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

```
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.462 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.603
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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    14629.1|
18.167 |
| 119.00    126.00| Convex Routing:      Stream #1| 14629.1    14550.9|
18.250 |
| 119.00    126.00| Subarea (UH) Added to Stream #2|      0.0     367.6|
16.333 |
| 126.00    126.00| Stream #2 Added to:  Stream #1| 14550.9    14631.8|
18.250 |
| 126.00    126.00| Zero Out:           Stream #2| 367.6      0.0|
|
+-----+
+-----+
| 126.00    127.00| Convex Routing:      Stream #1| 14631.8    14597.2|
18.417 |
| 126.00    127.00| Subarea (UH) Added to Stream #2|      0.0     432.9|
16.583 |
| 127.00    127.00| Stream #2 Added to:  Stream #1| 14597.2    14730.9|
18.417 |
| 127.00    127.00| Zero Out:           Stream #2| 432.9      0.0|
|
| 50150.00  127.00| Subarea (UH) Added to Stream #2|      0.0     363.6|
16.417 |
+-----+
+-----+
| 127.00    127.00| Stream #2 Added to:  Stream #1| 14730.9    14818.3|
18.417 |
| 127.00    127.00| Zero Out:           Stream #2| 363.6      0.0|
|
| 127.00    129.00| Convex Routing:      Stream #1| 14818.3    14782.3|
18.500 |
| 127.00    129.00| Subarea (UH) Added to Stream #2|      0.0     284.0|
16.500 |
| 129.00    129.00| Stream #2 Added to:  Stream #1| 14782.3    14853.6|
18.500 |
+-----+
+-----+
| 129.00    129.00| Zero Out:           Stream #2| 284.0      0.0|
|
| 129.00    133.00| Convex Routing:      Stream #1| 14853.6    14828.5|
18.583 |
| 133.00    133.00| View:               Stream #1|           14828.5|
18.583 | 12352.48| 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

FLOOD ROUTING ANALYSIS
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
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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO *
* EXISTING CONDITION - UH FREE DRAINING MODEL (NODE 133T) *
* 25-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV2533TF.DAT
TIME/DATE OF STUDY: 14:15 07/26/2018

** 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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.575 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.475
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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 11

>>>>VIEW STREAM NUMBER 2 HYDROGRAPH<<<<

=====

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+-----+
|
| * 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 2493.6|
16.917 | | |
| 132.00 13305.00| Convex Routing: Stream #2| 2493.6 2398.0|
17.167 | | |
| 13305.00 133.00| Convex Routing: Stream #2| 2398.0 2357.7|
17.417 | | |
| 132.00 133.00| Subarea (UH) Added to Stream #3| 0.0 1347.9|
16.667 | | |
| 133.00 133.00| Stream #3 Added to: Stream #2| 2357.7 2855.7|
17.333 | | |
+-----+
| 133.00 133.00| Zero Out: Stream #3| 1347.9 0.0|
| | | |
| 133.00 133.00| View: Stream #2| 2855.7|
17.333 | 1088.56| 3 |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
+-----+
+-----+
```

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 133C *
* 25-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV2533CF.DAT
TIME/DATE OF STUDY: 08:20 07/20/2018

** 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 = 49511.699 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.527 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.601
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

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

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

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

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

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.308; 30-MINUTE = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.462 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.603
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.575 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.475
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	14241.3
18.167				
119.00	126.00	Convex Routing: Stream #1	14241.3	14170.2
18.250				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	340.1
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	14170.2	14252.6
18.250				
126.00	126.00	Zero Out: Stream #2	340.1	0.0

126.00	127.00	Convex Routing: Stream #1	14252.6	14223.3
18.417				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	405.3
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	14223.3	14359.3
18.417				
127.00	127.00	Zero Out: Stream #2	405.3	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	338.7
16.417				

127.00	127.00	Stream #2 Added to: Stream #1	14359.3	14448.0
18.417				
127.00	127.00	Zero Out: Stream #2	338.7	0.0
127.00	129.00	Convex Routing: Stream #1	14448.0	14414.5
18.500				
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	265.1
16.500				
129.00	129.00	Stream #2 Added to: Stream #1	14414.5	14486.8
18.500				

129.00	129.00	Zero Out: Stream #2	265.1	0.0
129.00	133.00	Convex Routing: Stream #1	14486.8	14466.4
17.667				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1165.8
16.917				
132.00	13305.00	Convex Routing: Stream #2	1165.8	1124.5
17.417				

13305.00	133.00	Convex Routing: Stream #2	1124.5	1113.5
17.667				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	620.8
16.667				
133.00	133.00	Stream #3 Added to: Stream #2	1113.5	1519.0
17.500				
133.00	133.00	Zero Out: Stream #3	620.8	0.0
133.00	133.00	Stream #2 Added to: Stream #1	14466.4	15972.2
17.583				
133.00	133.00	Zero Out: Stream #2	1519.0	0.0

133.00	133.00	View: Stream #1		15972.2
17.583	13248.62	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 134U *
* 25-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV2534UF.DAT
TIME/DATE OF STUDY: 08:19 07/20/2018

** 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 = 49511.699 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.527 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.601
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.304; 30-MINUTE = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.462 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.603
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.575 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.475
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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) = 6461.32 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.499 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.523
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

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

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

Table with columns: TIME (2) TO, NODE #, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), FOOTNOTES. Includes summary header: * AES FLOODSCx PROGRAM RESULTS SUMMARY * and input filename: [EV2534UF.DAT].

13305.00	133.00	Convex Routing:	Stream #2	1115.0	1104.3
17.667					
+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	615.0
16.667					
133.00	133.00	Stream #3 Added to:	Stream #2	1104.3	1507.8
17.500					
133.00	133.00	Zero Out:	Stream #3	615.0	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	14417.7	15914.7
17.583					
133.00	133.00	Zero Out:	Stream #2	1507.8	0.0
+-----+					
133.00	134.00	Convex Routing:	Stream #1	15914.7	15900.7
17.750					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	350.4
16.583					
134.00	134.00	Stream #2 Added to:	Stream #1	15900.7	16080.3
17.750					
134.00	134.00	Zero Out:	Stream #2	350.4	0.0
134.00	134.00	View:	Stream #1		16080.3
17.750	13410.22	3			

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 134C *
* 25-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV2534CF.DAT
TIME/DATE OF STUDY: 08:19 07/20/2018

** 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 = 49511.699 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 2.119 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.298; LOW LOSS FRACTION = 0.433
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.42; 30-MINUTE = 0.78; 1-HOUR = 1.08
3-HOUR = 2.02; 6-HOUR = 3.00; 24-HOUR = 5.30
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 119.00 TO NODE 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

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

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

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

FLOW PROCESS FROM NODE 126.00 TO NODE 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.527 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.462 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.603
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7

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

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 129.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:

BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 213.00; DOWNSTREAM ELEVATION(FT) = 212.00
CHANNEL LENGTH(FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

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

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

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.856 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.567
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 132.00 TO NODE 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.575 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.475
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

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

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

FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 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) = 6461.32 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.499 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.523
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.348 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.475
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [EV2534CF.DAT]

Page: 1 of 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	13970.6
18.167					
119.00	126.00		Convex Routing: Stream #1	13970.6	13903.4
18.250					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	323.0
16.333					
126.00	126.00		Stream #2 Added to: Stream #1	13903.4	13987.2
18.250					
126.00	126.00		Zero Out: Stream #2	323.0	0.0
126.00	127.00		Convex Routing: Stream #1	13987.2	13960.5
18.417					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	387.5
16.583					
127.00	127.00		Stream #2 Added to: Stream #1	13960.5	14098.3
18.417					
127.00	127.00		Zero Out: Stream #2	387.5	0.0
50150.00	127.00		Subarea (UH) Added to Stream #2	0.0	324.2
16.417					
127.00	127.00		Stream #2 Added to: Stream #1	14098.3	14188.0
18.417					
127.00	127.00		Zero Out: Stream #2	324.2	0.0
127.00	129.00		Convex Routing: Stream #1	14188.0	14155.9
18.500					
127.00	129.00		Subarea (UH) Added to Stream #2	0.0	253.1
16.500					
129.00	129.00		Stream #2 Added to: Stream #1	14155.9	14261.0
17.583					
129.00	129.00		Zero Out: Stream #2	253.1	0.0
129.00	133.00		Convex Routing: Stream #1	14261.0	14252.6
17.667					
13010.00	132.00		Subarea (UH) Added to Stream #2	0.0	1124.8
16.917					
132.00	13305.00		Convex Routing: Stream #2	1124.8	1086.5
17.417					

13305.00	133.00		Convex Routing: Stream #2	1086.5	1076.5
17.667					
132.00	133.00		Subarea (UH) Added to Stream #3	0.0	598.1
16.667					
133.00	133.00		Stream #3 Added to: Stream #2	1076.5	1475.3
17.500					
133.00	133.00		Zero Out: Stream #3	598.1	0.0
133.00	133.00		Stream #2 Added to: Stream #1	14252.6	15724.4
17.583					
133.00	133.00		Zero Out: Stream #2	1475.3	0.0
133.00	134.00		Convex Routing: Stream #1	15724.4	15711.0
17.750					
133.00	134.00		Subarea (UH) Added to Stream #2	0.0	340.0
16.583					
134.00	134.00		Stream #2 Added to: Stream #1	15711.0	15891.1
17.750					
134.00	134.00		Zero Out: Stream #2	340.0	0.0
13500.00	134.00		Subarea (UH) Added to Stream #2	0.0	925.4
17.417					
134.00	134.00		Stream #2 Added to: Stream #1	15891.1	16769.7
17.750					
134.00	134.00		Zero Out: Stream #2	925.4	0.0
134.00	134.00		View: Stream #1		16769.7
17.750	13988.04	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

FLOOD ROUTING ANALYSIS
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
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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 137 *
* 25-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV25137F.DAT
TIME/DATE OF STUDY: 07:51 07/23/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.527 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<
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*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.462 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.603
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).

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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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.575 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.475
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) = 6461.32 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.499 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.523
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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.348 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.475
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.395 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.485
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

13305.00	133.00	Convex Routing:	Stream #2	1078.6	1068.9
17.667					
+-----+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	593.3
16.667					
133.00	133.00	Stream #3 Added to: Stream #2		1068.9	1466.8
17.500					
133.00	133.00	Zero Out:	Stream #3	593.3	0.0
133.00	133.00	Stream #2 Added to: Stream #1		14201.6	15667.1
17.583					
133.00	133.00	Zero Out:	Stream #2	1466.8	0.0
+-----+-----+					
133.00	134.00	Convex Routing:	Stream #1	15667.1	15653.9
17.750					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	337.1
16.583					
134.00	134.00	Stream #2 Added to: Stream #1		15653.9	15834.1
17.750					
134.00	134.00	Zero Out:	Stream #2	337.1	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2		0.0	919.9
17.417					
+-----+-----+					
134.00	134.00	Stream #2 Added to: Stream #1		15834.1	16708.4
17.750					
134.00	134.00	Zero Out:	Stream #2	919.9	0.0
134.00	137.00	Convex Routing:	Stream #1	16708.4	16694.8
17.833					
134.00	137.00	Subarea (UH) Added to Stream #2		0.0	383.5
16.500					
137.00	137.00	Stream #2 Added to: Stream #1		16694.8	16869.1
17.833					
+-----+-----+					
137.00	137.00	Zero Out:	Stream #2	383.5	0.0
137.00	137.00	View:	Stream #1		16869.1
17.833	14158.29	3			
+-----+-----+					
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL					
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM					
+-----+-----+					

END OF FLOODSCx ROUTING ANALYSIS

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

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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 138 *
* 25-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV25138F.DAT
TIME/DATE OF STUDY: 08:18 07/20/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.527 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.601
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

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

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

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

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

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.287; 30-MINUTE = 0.348; 1-HOUR = 0.392
3-HOUR = 0.734; 6-HOUR = 0.885; 24-HOUR = 0.932

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.462 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.603
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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.575 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.475
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) = 6461.32 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.499 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.523
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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.348 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.475
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.395 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.485
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) = 4643.66 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 = 1332.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.525 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.265; LOW LOSS FRACTION = 0.486
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 *

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UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
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10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	13844.0
18.167				
119.00	126.00	Convex Routing: Stream #1	13844.0	13778.1
18.250				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	316.1
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	13778.1	13862.5
18.250				
126.00	126.00	Zero Out: Stream #2	316.1	0.0
126.00	127.00	Convex Routing: Stream #1	13862.5	13836.4
18.417				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	380.0
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	13836.4	13975.1
18.417				
127.00	127.00	Zero Out: Stream #2	380.0	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	318.0
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	13975.1	14065.3
18.417				
127.00	127.00	Zero Out: Stream #2	318.0	0.0
127.00	129.00	Convex Routing: Stream #1	14065.3	14034.3
18.500				
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	248.1
16.500				
129.00	129.00	Stream #2 Added to: Stream #1	14034.3	14157.6
17.583				
129.00	129.00	Zero Out: Stream #2	248.1	0.0
129.00	133.00	Convex Routing: Stream #1	14157.6	14149.9
17.583				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1107.1
16.917				
132.00	13305.00	Convex Routing: Stream #2	1107.1	1069.9
17.417				

13305.00	133.00	Convex Routing: Stream #2	1069.9	1060.3
17.667				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	588.3
16.667				
133.00	133.00	Stream #3 Added to: Stream #2	1060.3	1456.8
17.583				
133.00	133.00	Zero Out: Stream #3	588.3	0.0
133.00	133.00	Stream #2 Added to: Stream #1	14149.9	15606.8
17.583				
133.00	133.00	Zero Out: Stream #2	1456.8	0.0
133.00	134.00	Convex Routing: Stream #1	15606.8	15593.7
17.750				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	334.0
16.583				
134.00	134.00	Stream #2 Added to: Stream #1	15593.7	15774.1
17.750				
134.00	134.00	Zero Out: Stream #2	334.0	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	914.1
17.417				
134.00	134.00	Stream #2 Added to: Stream #1	15774.1	16643.8
17.750				
134.00	134.00	Zero Out: Stream #2	914.1	0.0
134.00	137.00	Convex Routing: Stream #1	16643.8	16631.1
17.833				
134.00	137.00	Subarea (UH) Added to Stream #2	0.0	379.9
16.500				
137.00	137.00	Stream #2 Added to: Stream #1	16631.1	16805.8
17.833				
137.00	137.00	Zero Out: Stream #2	379.9	0.0
137.00	138.00	Convex Routing: Stream #1	16805.8	16794.6
18.000				
137.00	138.00	Subarea (UH) Added to Stream #2	0.0	373.1
16.583				
138.00	138.00	Stream #2 Added to: Stream #1	16794.6	16982.9
18.000				
138.00	138.00	Zero Out: Stream #2	373.1	0.0

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


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|
| * 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 |
-----+-----+-----+
| 138.00 138.00| View: Stream #1| 16982.9|
18.000 | 14341.78| 3 |
-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
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END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
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

FILE NAME: EV25139F.DAT
TIME/DATE OF STUDY: 08:17 07/20/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00
CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 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) = 0.297; LOW LOSS FRACTION = 0.615
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.70 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.527 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.601

SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

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

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

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

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

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.551
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.34; 30-MINUTE = 0.72; 1-HOUR = 0.95
3-HOUR = 1.59; 6-HOUR = 2.20; 24-HOUR = 3.68
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.286; 30-MINUTE = 0.348; 1-HOUR = 0.391
3-HOUR = 0.733; 6-HOUR = 0.885; 24-HOUR = 0.932

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.42 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.462 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.603
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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.575 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.475
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) = 6461.32 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.499 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; LOW LOSS FRACTION = 0.523
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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.348 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.475
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.395 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.485
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) = 4643.66 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 = 1332.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE *USER ENTERED "LAG" TIME = 0.525 HOURS VALLEY(DEVELOPED) S-GRAPH SELECTED MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.265; LOW LOSS FRACTION = 0.486 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 = 427.800 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 = 0.458 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]

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UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	FOOTNOTES
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10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	13825.5	
18.167					
119.00	126.00	Convex Routing: Stream #1	13825.5	13760.1	
18.250					
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	314.9	
16.333					
126.00	126.00	Stream #2 Added to: Stream #1	13760.1	13844.5	
18.250					
126.00	126.00	Zero Out: Stream #2	314.9	0.0	
126.00	127.00	Convex Routing: Stream #1	13844.5	13818.7	
18.417					
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	378.7	
16.583					
127.00	127.00	Stream #2 Added to: Stream #1	13818.7	13957.5	
18.417					
127.00	127.00	Zero Out: Stream #2	378.7	0.0	
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	317.0	
16.417					
127.00	127.00	Stream #2 Added to: Stream #1	13957.5	14047.8	
18.417					
127.00	127.00	Zero Out: Stream #2	317.0	0.0	
127.00	129.00	Convex Routing: Stream #1	14047.8	14016.9	
18.500					
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	247.2	
16.500					
129.00	129.00	Stream #2 Added to: Stream #1	14016.9	14143.0	
17.583					
129.00	129.00	Zero Out: Stream #2	247.2	0.0	
129.00	133.00	Convex Routing: Stream #1	14143.0	14135.7	
17.583					
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1104.3	
16.917					
132.00	13305.00	Convex Routing: Stream #2	1104.3	1067.3	
17.417					

13305.00	133.00	Convex Routing: Stream #2	1067.3	1057.8	
17.667					
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	586.7	
16.667					
133.00	133.00	Stream #3 Added to: Stream #2	1057.8	1454.1	
17.583					
133.00	133.00	Zero Out: Stream #3	586.7	0.0	
133.00	133.00	Stream #2 Added to: Stream #1	14135.7	15589.8	
17.583					
133.00	133.00	Zero Out: Stream #2	1454.1	0.0	
133.00	134.00	Convex Routing: Stream #1	15589.8	15576.8	
17.750					
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	333.0	
16.583					
134.00	134.00	Stream #2 Added to: Stream #1	15576.8	15757.3	
17.750					
134.00	134.00	Zero Out: Stream #2	333.0	0.0	
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	912.4	
17.417					
134.00	134.00	Stream #2 Added to: Stream #1	15757.3	16625.6	
17.750					
134.00	134.00	Zero Out: Stream #2	912.4	0.0	
134.00	137.00	Convex Routing: Stream #1	16625.6	16613.1	
17.833					
134.00	137.00	Subarea (UH) Added to Stream #2	0.0	378.7	
16.500					
137.00	137.00	Stream #2 Added to: Stream #1	16613.1	16788.0	
17.833					
137.00	137.00	Zero Out: Stream #2	378.7	0.0	
137.00	138.00	Convex Routing: Stream #1	16788.0	16776.8	
18.000					
137.00	138.00	Subarea (UH) Added to Stream #2	0.0	372.0	
16.583					
138.00	138.00	Stream #2 Added to: Stream #1	16776.8	16965.3	
18.000					
138.00	138.00	Zero Out: Stream #2	372.0	0.0	

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

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| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV25139F.DAT ]
Page: 2 of |
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|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+
| 138.00 139.00| Convex Routing: Stream #1| 16965.3 16954.6|
18.083 | | |
| 138.00 139.00| Subarea (UH) Added to Stream #2| 0.0 180.1|
16.333 | | |
| 139.00 139.00| Stream #2 Added to: Stream #1| 16954.6 17013.0|
18.000 | | |
| 139.00 139.00| Zero Out: Stream #2| 180.1 0.0|
| | | |
| 139.00 139.00| View: Stream #1| 17013.0|
18.000 | 14405.19| 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

FLOOD ROUTING ANALYSIS
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:

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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRANING UH *
* EXISTING CONISITION - REGIONAL NODE 119 *
* 50-YR EV DECEMBER 2018 JCLARK *

FILE NAME: EV50119F.DAT
TIME/DATE OF STUDY: 11:06 12/27/2018

** 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 = 49511.699 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<<<<

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+-----+
|
| * 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 17843.7|
18.083 | | |
| 119.00 119.00| View: Stream #1| 17843.7|
18.083 | 14169.02| 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 |
+-----+-----+-----+-----+
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END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
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 DRANING UH *
* EXISTING CONSITION - REGIONAL NODE 126 *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV50126F.DAT
TIME/DATE OF STUDY: 11:54 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #			
PEAK (HR)	MODELED (AF)	FOOTNOTES		

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	17758.5
18.083				
119.00	126.00	Convex Routing: Stream #1	17758.5	17660.1
18.167				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	449.7
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	17660.1	17766.7
18.167				
126.00	126.00	Zero Out: Stream #2	449.7	0.0

126.00	126.00	View: Stream #1		17766.7
18.167	14294.58	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 DRANING UH *
* EXISTING CONSIITION - REGIONAL NODE 127 *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV50127F.DAT
TIME/DATE OF STUDY: 11:53 07/19/2018

** 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 = 49511.699 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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.514 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.568
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941
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*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
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>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
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*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
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```
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
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*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
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>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
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```
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941
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*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
```

```
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
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```
*****
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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	17541.4
18.083				
119.00	126.00	Convex Routing: Stream #1	17541.4	17445.6
18.167				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	436.3
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	17445.6	17553.1
18.167				
126.00	126.00	Zero Out: Stream #2	436.3	0.0

126.00	127.00	Convex Routing: Stream #1	17553.1	17489.8
18.333				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	515.1
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	17489.8	17661.5
18.333				
127.00	127.00	Zero Out: Stream #2	515.1	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	430.8
16.417				

127.00	127.00	Stream #2 Added to: Stream #1	17661.5	17778.5
18.333				
127.00	127.00	Zero Out: Stream #2	430.8	0.0
127.00	127.00	View: Stream #1		17778.5
18.333	14650.09	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 DRANING UH *
* EXISTING CONSIITION - REGIONAL NODE 133U *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV5033UF.DAT
TIME/DATE OF STUDY: 11:51 07/19/2018

** 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 = 49511.699 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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.514 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.568
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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5-MINUTE = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.452 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.572
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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).

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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<<<<

Table with columns: TIME(2) TO, NODE #, MODELED (AF), FOOTNOTES, UPSTREAM PEAK (CFS), DOWNSTREAM PEAK (CFS). Rows include process details like 'Subarea (UH) Added to Stream #1', 'Convex Routing', and 'Zero Out'.

|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

FLOOD ROUTING ANALYSIS
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 *
* EXISTING CONDITION - UH FREE DRAINING MODEL (NODE 133T) *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV5033TF.DAT
TIME/DATE OF STUDY: 11:52 07/19/2018

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 0.00 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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 24-HOUR = 0.986

FLOW PROCESS FROM NODE 132.00 TO NODE 132.50 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) = 314.60

CHANNEL LENGTH (FT) = 9000.00 MANNING'S FACTOR = 0.040
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 132.50 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) = 314.60; DOWNSTREAM ELEVATION (FT) = 218.81
CHANNEL LENGTH (FT) = 7637.28 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.562 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.443
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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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<<<<

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=====
*****
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<<<<
=====

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|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV5033TF.DAT ]
Page: 1 of 1
-----+-----
|UPSTREAM DOWNSTREAM|                                     | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE|                                     |
| NODE #     NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR)   | MODELED (AF)| FOOTNOTES |
-----+-----
| 0.00      132.00| Subarea (UH) Added to Stream #2| 0.0      2918.0|
16.833 | |
| 132.00    132.50| Convex Routing:      Stream #2| 2918.0    2831.8|
17.083 | |
| 132.50    133.00| Convex Routing:      Stream #2| 2831.8    2791.7|
17.333 | |
| 132.00    133.00| Subarea (UH) Added to Stream #3| 0.0      1574.3|
16.583 | |
| 133.00    133.00| Stream #3 Added to:  Stream #2| 2791.7    3403.1|
17.333 | |
-----+-----
| 133.00    133.00| Zero Out:      Stream #3| 1574.3    0.0|
|
| 133.00    133.00| Stream #2 Added to: Stream #1| 0.0      3403.1|
17.333 | |
| 133.00    133.00| Zero Out:      Stream #2| 3403.1    0.0|
|
| 133.00    133.00| View:      Stream #1| 3403.1
17.333 | 1292.33| 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

FLOOD ROUTING ANALYSIS
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 DRANING UH *
* EXISTING CONSIITION - REGIONAL NODE 133C *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV5033CF.DAT
TIME/DATE OF STUDY: 11:50 07/19/2018

** 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 = 49511.699 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.514 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.568
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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5-MINUTE = 0.308; 30-MINUTE = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.452 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.572
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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).

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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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.559 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.443
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES			
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	17015.0
18.083					
119.00	126.00		Convex Routing: Stream #1	17015.0	16926.8
18.167					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	401.0
16.333					
126.00	126.00		Stream #2 Added to: Stream #1	16926.8	17036.9
18.167					
126.00	126.00		Zero Out: Stream #2	401.0	0.0
126.00	127.00		Convex Routing: Stream #1	17036.9	16981.9
18.333					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	479.4
16.583					
127.00	127.00		Stream #2 Added to: Stream #1	16981.9	17157.2
18.333					
127.00	127.00		Zero Out: Stream #2	479.4	0.0
127.00	129.00		Convex Routing: Stream #1	17157.2	17121.5
18.417					
50150.00	127.00		Subarea (UH) Added to Stream #2	0.0	398.3
16.417					
127.00	127.00		Stream #2 Added to: Stream #1	17121.5	17227.8
18.417					
127.00	127.00		Zero Out: Stream #2	398.3	0.0
127.00	129.00		Subarea (UH) Added to Stream #2	0.0	313.7
16.500					
129.00	129.00		Stream #2 Added to: Stream #1	17227.8	17343.1
17.500					
129.00	129.00		Zero Out: Stream #2	313.7	0.0
129.00	133.00		Convex Routing: Stream #1	17343.1	17335.5
17.583					
13010.00	132.00		Subarea (UH) Added to Stream #2	0.0	1357.1
16.833					
132.00	13305.00		Convex Routing: Stream #2	1357.1	1334.0
17.333					

13305.00	133.00		Convex Routing: Stream #2	1334.0	1319.8
17.583					
132.00	133.00		Subarea (UH) Added to Stream #3	0.0	723.6
16.583					
133.00	133.00		Stream #3 Added to: Stream #2	1319.8	1815.9
17.500					
133.00	133.00		Zero Out: Stream #3	723.6	0.0
133.00	133.00		Stream #2 Added to: Stream #1	17335.5	19142.8
17.500					
133.00	133.00		Zero Out: Stream #2	1815.9	0.0
133.00	133.00		View: Stream #1		19142.8
17.500		15845.55	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 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 DRANING UH *
* EXISTING CONSITION - REGIONAL NODE 134U *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV5034UF.DAT
TIME/DATE OF STUDY: 11:49 07/19/2018

** 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 = 49511.699 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.514 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.568
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE = 0.304; 30-MINUTE = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.452 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.572
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.559 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.443
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.488 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

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

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

Table with columns: TIME(2) TO, UPSTREAM, DOWNSTREAM, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), FOOTNOTES. Includes summary header: * AES FLOODSCx PROGRAM RESULTS SUMMARY * and input filename: [EV5034UF.DAT].

13305.00	133.00	Convex Routing:	Stream #2	1322.5	1308.5
17.583					
+-----+-----+-----+-----+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	716.9
16.583					
133.00	133.00	Stream #3 Added to:	Stream #2	1308.5	1802.1
17.500					
133.00	133.00	Zero Out:	Stream #3	716.9	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	17276.8	19072.5
17.500					
133.00	133.00	Zero Out:	Stream #2	1802.1	0.0
+-----+-----+-----+-----+-----+					
133.00	134.00	Convex Routing:	Stream #1	19072.5	19058.7
17.667					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	408.2
16.583					
134.00	134.00	Stream #2 Added to:	Stream #1	19058.7	19283.8
17.667					
134.00	134.00	Zero Out:	Stream #2	408.2	0.0
134.00	134.00	View:	Stream #1		19283.8
17.667	16038.74	3			

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

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRANING UH *
* EXISTING CONSIITION - REGIONAL NODE 134C *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV5034CF.DAT
TIME/DATE OF STUDY: 11:15 12/27/2018

** 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 = 49511.699 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 119.00 TO NODE 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

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

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

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

FLOW PROCESS FROM NODE 126.00 TO NODE 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.514 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.568
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.452 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.572
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7

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

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 129.00 TO NODE 133.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 213.00; DOWNSTREAM ELEVATION(FT) = 212.00
CHANNEL LENGTH(FT) = 1389.52 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

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

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

WATERSHED AREA = 4924.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.821 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.538
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 132.00 TO NODE 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.559 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.443
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

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

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

FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.488 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.292 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.443
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [EV5034CF.DAT]

Page: 1 of 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE		UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	16693.5
18.083				
119.00	126.00	Convex Routing: Stream #1	16693.5	16608.4
18.167				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	381.7
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	16608.4	16720.3
18.167				
126.00	126.00	Zero Out: Stream #2	381.7	0.0

126.00	127.00	Convex Routing: Stream #1	16720.3	16670.1
18.333				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	459.2
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	16670.1	16847.7
18.333				
127.00	127.00	Zero Out: Stream #2	459.2	0.0
127.00	129.00	Convex Routing: Stream #1	16847.7	16812.0
18.417				

50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	380.4
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	16812.0	16923.8
17.500				
127.00	127.00	Zero Out: Stream #2	380.4	0.0
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	300.0
16.500				
129.00	129.00	Stream #2 Added to: Stream #1	16923.8	17085.3
17.500				

129.00	129.00	Zero Out: Stream #2	300.0	0.0
129.00	133.00	Convex Routing: Stream #1	17085.3	17078.0
17.500				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1308.6
16.833				
132.00	13305.00	Convex Routing: Stream #2	1308.6	1289.0
17.333				

13305.00	133.00	Convex Routing: Stream #2	1289.0	1275.5
17.583				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	697.6
16.583				
133.00	133.00	Stream #3 Added to: Stream #2	1275.5	1764.9
17.500				
133.00	133.00	Zero Out: Stream #3	697.6	0.0
133.00	133.00	Stream #2 Added to: Stream #1	17078.0	18842.9
17.500				
133.00	133.00	Zero Out: Stream #2	1764.9	0.0

133.00	134.00	Convex Routing: Stream #1	18842.9	18829.1
17.667				
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	396.5
16.583				
134.00	134.00	Stream #2 Added to: Stream #1	18829.1	19054.4
17.667				
134.00	134.00	Zero Out: Stream #2	396.5	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	1096.9
17.333				

134.00	134.00	Stream #2 Added to: Stream #1	19054.4	20117.6
17.583				
134.00	134.00	Zero Out: Stream #2	1096.9	0.0
134.00	134.00	View: Stream #1		20117.6
17.583	16724.59	3		

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

END OF FLOODSCx ROUTING ANALYSIS

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

Michael Baker International
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Santa Ana, CA
92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRANING UH *
* EXISTING CONSIITION - REGIONAL NODE 137 *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV50137F.DAT
TIME/DATE OF STUDY: 11:44 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

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

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

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

FLOW PROCESS FROM NODE 126.00 TO NODE 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.514 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.568
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.291; 30-MINUTE = 0.350; 1-HOUR = 0.394
3-HOUR = 0.738; 6-HOUR = 0.886; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.452 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.572
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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.559 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.443
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.488 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; 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 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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.292 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.443
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.455
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

13305.00	133.00	Convex Routing:	Stream #2	1279.8	1266.5
17.583					
+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	692.2
16.583					
133.00	133.00	Stream #3 Added to:	Stream #2	1266.5	1754.3
17.500					
133.00	133.00	Zero Out:	Stream #3	692.2	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	17018.5	18772.8
17.500					
133.00	133.00	Zero Out:	Stream #2	1754.3	0.0
+-----+					
133.00	134.00	Convex Routing:	Stream #1	18772.8	18759.0
17.667					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	393.2
16.583					
134.00	134.00	Stream #2 Added to:	Stream #1	18759.0	18984.5
17.667					
134.00	134.00	Zero Out:	Stream #2	393.2	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2		0.0	1090.3
17.333					
+-----+					
134.00	134.00	Stream #2 Added to:	Stream #1	18984.5	20043.0
17.583					
134.00	134.00	Zero Out:	Stream #2	1090.3	0.0
134.00	137.00	Convex Routing:	Stream #1	20043.0	20023.9
17.750					
134.00	137.00	Subarea (UH) Added to Stream #2		0.0	444.8
16.417					
137.00	137.00	Stream #2 Added to:	Stream #1	20023.9	20237.3
17.750					
+-----+					
137.00	137.00	Zero Out:	Stream #2	444.8	0.0
137.00	137.00	View:	Stream #1		20237.3
17.750	16926.24	3			
+-----+					
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL					
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM					
+-----+					

END OF FLOODSCx ROUTING ANALYSIS

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

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Santa Ana, CA
92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRANING UH *
* EXISTING CONSITION - REGIONAL NODE 138 *
* 50-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV50138F.DAT
TIME/DATE OF STUDY: 11:42 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.514 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.568
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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.452 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.572
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).

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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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.559 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.443
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.488 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; 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 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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.292 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.443
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.455
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 = 1332.600 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) = 0.265; 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 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 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #				
PEAK (HR)	MODELED (AF)		FOOTNOTES		
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	16543.2
18.083					
119.00	126.00		Convex Routing: Stream #1	16543.2	16458.9
18.167					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	373.8
16.333					
126.00	126.00		Stream #2 Added to: Stream #1	16458.9	16571.8
18.167					
126.00	126.00		Zero Out: Stream #2	373.8	0.0
126.00	127.00		Convex Routing: Stream #1	16571.8	16523.0
18.333					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	450.7
16.583					
127.00	127.00		Stream #2 Added to: Stream #1	16523.0	16701.8
18.333					
127.00	127.00		Zero Out: Stream #2	450.7	0.0
127.00	129.00		Convex Routing: Stream #1	16701.8	16666.5
18.417					
50150.00	127.00		Subarea (UH) Added to Stream #2	0.0	373.0
16.417					
127.00	127.00		Stream #2 Added to: Stream #1	16666.5	16799.3
17.500					
127.00	127.00		Zero Out: Stream #2	373.0	0.0
127.00	129.00		Subarea (UH) Added to Stream #2	0.0	294.3
16.500					
129.00	129.00		Stream #2 Added to: Stream #1	16799.3	16960.5
17.500					
129.00	129.00		Zero Out: Stream #2	294.3	0.0
129.00	133.00		Convex Routing: Stream #1	16960.5	16957.6
17.500					
13010.00	132.00		Subarea (UH) Added to Stream #2	0.0	1288.7
16.833					
132.00	13305.00		Convex Routing: Stream #2	1288.7	1270.2
17.333					

13305.00	133.00		Convex Routing: Stream #2	1270.2	1257.0
17.583					
132.00	133.00		Subarea (UH) Added to Stream #3	0.0	686.5
16.583					
133.00	133.00		Stream #3 Added to: Stream #2	1257.0	1742.9
17.500					
133.00	133.00		Zero Out: Stream #3	686.5	0.0
133.00	133.00		Stream #2 Added to: Stream #1	16957.6	18700.5
17.500					
133.00	133.00		Zero Out: Stream #2	1742.9	0.0
133.00	134.00		Convex Routing: Stream #1	18700.5	18686.8
17.667					
133.00	134.00		Subarea (UH) Added to Stream #2	0.0	389.7
16.583					
134.00	134.00		Stream #2 Added to: Stream #1	18686.8	18912.3
17.667					
134.00	134.00		Zero Out: Stream #2	389.7	0.0
13500.00	134.00		Subarea (UH) Added to Stream #2	0.0	1083.5
17.333					
134.00	134.00		Stream #2 Added to: Stream #1	18912.3	19966.5
17.583					
134.00	134.00		Zero Out: Stream #2	1083.5	0.0
134.00	137.00		Convex Routing: Stream #1	19966.5	19947.2
17.750					
134.00	137.00		Subarea (UH) Added to Stream #2	0.0	440.9
16.417					
137.00	137.00		Stream #2 Added to: Stream #1	19947.2	20161.1
17.750					
137.00	137.00		Zero Out: Stream #2	440.9	0.0
137.00	138.00		Convex Routing: Stream #1	20161.1	20141.1
17.833					
137.00	138.00		Subarea (UH) Added to Stream #2	0.0	434.0
16.583					
138.00	138.00		Stream #2 Added to: Stream #1	20141.1	20379.5
17.833					
138.00	138.00		Zero Out: Stream #2	434.0	0.0

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

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|
| * 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 |
-----+-----+-----+-----+
| 138.00 138.00| View: Stream #1| 20379.5|
17.833 | 17143.21| 3 |
-----+-----+-----+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL |
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM |
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END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
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 DRANING UH *
* EXISTING CONSIITION - REGIONAL NODE 139 *
* 50-YR EV JULY 2018 CCHIU *

FILE NAME: EV50139F.DAT
TIME/DATE OF STUDY: 11:40 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.290 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.582
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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


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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.514 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.568
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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.363 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.517
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.37; 30-MINUTE = 0.80; 1-HOUR = 1.06
3-HOUR = 1.78; 6-HOUR = 2.47; 24-HOUR = 4.12
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.452 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.572
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).

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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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.559 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.443
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.488 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; 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 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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.292 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.443
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 = 1238.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.389 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.280; LOW LOSS FRACTION = 0.455
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 = 1332.600 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) = 0.265; 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 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 = 427.800 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) = 0.207; LOW LOSS FRACTION = 0.438
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 1

UPSTREAM TIME (2) PEAK (HR)	DOWNSTREAM NODE # MODELED (AF)	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	PROCESS
10100.00	119.00	0.0	16521.4	Subarea (UH) Added to Stream #1
18.083				
119.00	126.00	16521.4	16437.4	Convex Routing: Stream #1
18.167				
119.00	126.00	0.0	372.4	Subarea (UH) Added to Stream #2
16.333				
126.00	126.00	16437.4	16550.4	Stream #2 Added to: Stream #1
18.167				
126.00	126.00	372.4	0.0	Zero Out: Stream #2
126.00	127.00	16550.4	16502.0	Convex Routing: Stream #1
18.333				
126.00	127.00	0.0	449.2	Subarea (UH) Added to Stream #2
16.583				
127.00	127.00	16502.0	16681.0	Stream #2 Added to: Stream #1
18.333				
127.00	127.00	449.2	0.0	Zero Out: Stream #2
127.00	129.00	16681.0	16645.7	Convex Routing: Stream #1
18.417				
50150.00	127.00	0.0	371.7	Subarea (UH) Added to Stream #2
16.417				
127.00	127.00	16645.7	16781.8	Stream #2 Added to: Stream #1
17.500				
127.00	127.00	371.7	0.0	Zero Out: Stream #2
127.00	129.00	0.0	293.3	Subarea (UH) Added to Stream #2
16.500				
129.00	129.00	16781.8	16942.9	Stream #2 Added to: Stream #1
17.500				
129.00	129.00	293.3	0.0	Zero Out: Stream #2
129.00	133.00	16942.9	16940.5	Convex Routing: Stream #1
17.500				
13010.00	132.00	0.0	1285.5	Subarea (UH) Added to Stream #2
16.833				
132.00	13305.00	1285.5	1267.2	Convex Routing: Stream #2
17.333				

13305.00	133.00	1267.2	1254.0	Convex Routing: Stream #2
17.583				
132.00	133.00	0.0	684.7	Subarea (UH) Added to Stream #3
16.583				
133.00	133.00	1254.0	1740.0	Stream #3 Added to: Stream #2
17.500				
133.00	133.00	684.7	0.0	Zero Out: Stream #3
133.00	133.00	16940.5	18680.4	Stream #2 Added to: Stream #1
17.500				
133.00	133.00	1740.0	0.0	Zero Out: Stream #2
133.00	134.00	18680.4	18666.7	Convex Routing: Stream #1
17.667				
133.00	134.00	0.0	388.6	Subarea (UH) Added to Stream #2
16.583				
134.00	134.00	18666.7	18892.2	Stream #2 Added to: Stream #1
17.667				
134.00	134.00	388.6	0.0	Zero Out: Stream #2
13500.00	134.00	0.0	1081.5	Subarea (UH) Added to Stream #2
17.333				
134.00	134.00	18892.2	19945.4	Stream #2 Added to: Stream #1
17.583				
134.00	134.00	1081.5	0.0	Zero Out: Stream #2
134.00	137.00	19945.4	19926.0	Convex Routing: Stream #1
17.750				
134.00	137.00	0.0	439.6	Subarea (UH) Added to Stream #2
16.417				
137.00	137.00	19926.0	20140.1	Stream #2 Added to: Stream #1
17.750				
137.00	137.00	439.6	0.0	Zero Out: Stream #2
137.00	138.00	20140.1	20120.6	Convex Routing: Stream #1
17.833				
137.00	138.00	0.0	432.8	Subarea (UH) Added to Stream #2
16.583				
138.00	138.00	20120.6	20359.1	Stream #2 Added to: Stream #1
17.833				
138.00	138.00	432.8	0.0	Zero Out: Stream #2

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

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| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV50139F.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 |
-----+-----+-----+-----+
| 138.00 139.00| Convex Routing: Stream #1| 20359.1 20353.2|
17.917 | | |
| 138.00 139.00| Subarea (UH) Added to Stream #2| 0.0 204.6|
16.333 | | |
| 139.00 139.00| Stream #2 Added to: Stream #1| 20353.2 20422.9|
17.917 | | |
| 139.00 139.00| Zero Out: Stream #2| 204.6 0.0|
| | | |
| 139.00 139.00| View: Stream #1| 20422.9|
17.917 | 17216.79| 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

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1264

Analysis prepared by:

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 119 *
* 100-YR EV DECEMBER 2018 JCLARK *

FILE NAME: EV00119F.DAT
TIME/DATE OF STUDY: 11:07 12/27/2018

** 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 = 49511.699 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 20326.2|
18.000 | | |
| 119.00 119.00| View: Stream #1| 20326.2|
18.000 | 16055.00| 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

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Analysis prepared by:

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92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 126 *
* 100-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV00126F.DAT
TIME/DATE OF STUDY: 10:37 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	NODE #			
PEAK (HR)	MODELED (AF)	FOOTNOTES		

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	20227.9
18.000				
119.00	126.00	Convex Routing: Stream #1	20227.9	20116.9
18.083				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	514.7
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	20116.9	20248.6
18.083				
126.00	126.00	Zero Out: Stream #2	514.7	0.0

126.00	126.00	View: Stream #1		20248.6
18.083	16200.21	3		

| Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT INTERVAL

| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 127 *
* 100-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV00127F.DAT
TIME/DATE OF STUDY: 10:36 07/19/2018

** 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 = 49511.699 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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.502 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.543
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 = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941
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*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
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>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
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*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
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```
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
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*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
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>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
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```
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.355 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.332; 30-MINUTE = 0.384; 1-HOUR = 0.424
3-HOUR = 0.774; 6-HOUR = 0.899; 24-HOUR = 0.941
=====
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```
*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
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```
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====
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*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
```

```
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====
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*****
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 1

UPSTREAM TIME (2) TO	DOWNSTREAM MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
PEAK (HR)	MODELED (AF)	FOOTNOTES		

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	19977.6
18.000				
119.00	126.00	Convex Routing: Stream #1	19977.6	19869.0
18.083				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	499.4
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	19869.0	20001.6
18.083				
126.00	126.00	Zero Out: Stream #2	499.4	0.0

126.00	127.00	Convex Routing: Stream #1	20001.6	19913.6
18.250				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	585.9
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	19913.6	20124.8
18.250				
127.00	127.00	Zero Out: Stream #2	585.9	0.0
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	491.4
16.417				

127.00	127.00	Stream #2 Added to: Stream #1	20124.8	20272.7
18.250				
127.00	127.00	Zero Out: Stream #2	491.4	0.0
127.00	127.00	View: Stream #1		20272.7
18.250	16609.82	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 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 *
* EXISTING CONDITION - REGIONAL NODE 133U *
* 100-YR EV SEPT 2017 ASUN *

FILE NAME: EV0033UF.DAT
TIME/DATE OF STUDY: 10:33 07/19/2018

** 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 = 49511.699 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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.502 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.543
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.355 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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5-MINUTE = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 24-HOUR = 0.940

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.441 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.549
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 = 0.329; 30-MINUTE = 0.381; 1-HOUR = 0.422
3-HOUR = 0.771; 6-HOUR = 0.898; 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).

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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<<<<

Table with columns: TIME (2) TO, NODE #, MODELED (AF), FOOTNOTES, PEAK (CFS), and UPSTREAM/DOWNSTREAM. It details hydrologic/hydraulic processes like 'Subarea (UH) Added to Stream #1', 'Convex Routing', and 'Zero Out' across various nodes and stream segments.

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

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 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 *
* EXISTING CONDITION - REGIONAL NODE 133T *
* 100-YR EV SEPT 2018 ROKAMOTO *

FILE NAME: EV0033TF.DAT
TIME/DATE OF STUDY: 10:34 07/19/2018

** 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 = 0.796 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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.543 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.418
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 = 0.731; 30-MINUTE = 0.731; 1-HOUR = 0.731
3-HOUR = 0.956; 6-HOUR = 0.977; 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 = 11

>>>>VIEW STREAM NUMBER 2 HYDROGRAPH<<<<<

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+-----+
|
| * 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 3360.0|
16.833 | | |
| 132.00 13305.00| Convex Routing: Stream #2| 3360.0 3253.8|
17.083 | | |
| 13305.00 133.00| Convex Routing: Stream #2| 3253.8 3191.4|
17.333 | | |
| 132.00 133.00| Subarea (UH) Added to Stream #3| 0.0 1801.0|
16.583 | | |
| 133.00 133.00| Stream #3 Added to: Stream #2| 3191.4 3926.0|
17.250 | | |
+-----+
| 133.00 133.00| Zero Out: Stream #3| 1801.0 0.0|
| | | |
| 133.00 133.00| View: Stream #2| 3926.0|
17.250 | 1473.04| 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

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 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 *
* EXISTING CONDITION - REGIONAL NODE 133C *
* 100-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV0033CF.DAT
TIME/DATE OF STUDY: 10:33 07/19/2018

** 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 = 49511.699 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.502 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.543
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.355 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE = 0.308; 30-MINUTE = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 6-HOUR = 0.891; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.441 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.549
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 0.796 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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.543 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.418
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 = 0.362; 1-HOUR = 0.408
3-HOUR = 0.753; 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 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS FOOTNOTES	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
--	--	---	------------------------	--------------------------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	19370.6
18.000				
119.00	126.00	Convex Routing: Stream #1	19370.6	19269.4
18.083				
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	460.1
16.333				
126.00	126.00	Stream #2 Added to: Stream #1	19269.4	19405.3
18.083				
126.00	126.00	Zero Out: Stream #2	460.1	0.0

126.00	127.00	Convex Routing: Stream #1	19405.3	19328.5
18.250				
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	546.5
16.583				
127.00	127.00	Stream #2 Added to: Stream #1	19328.5	19544.2
18.250				
127.00	127.00	Zero Out: Stream #2	546.5	0.0
127.00	129.00	Convex Routing: Stream #1	19544.2	19507.2
18.333				

50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	455.3
16.417				
127.00	127.00	Stream #2 Added to: Stream #1	19507.2	19645.1
18.333				
127.00	127.00	Zero Out: Stream #2	455.3	0.0
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	358.5
16.500				
129.00	129.00	Stream #2 Added to: Stream #1	19645.1	19764.7
18.333				

129.00	129.00	Zero Out: Stream #2	358.5	0.0
129.00	133.00	Convex Routing: Stream #1	19764.7	19739.9
17.500				
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1578.8
16.833				
132.00	13305.00	Convex Routing: Stream #2	1578.8	1531.9
17.250				

13305.00	133.00	Convex Routing: Stream #2	1531.9	1521.0
17.500				
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	826.7
16.583				
133.00	133.00	Stream #3 Added to: Stream #2	1521.0	2093.3
17.417				
133.00	133.00	Zero Out: Stream #3	826.7	0.0
133.00	133.00	Stream #2 Added to: Stream #1	19739.9	21828.1
17.500				
133.00	133.00	Zero Out: Stream #2	2093.3	0.0

133.00	133.00	View: Stream #1		21828.1
17.500	17985.21	3		

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 134U *
* 100-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV0034UF.DAT
TIME/DATE OF STUDY: 10:31 07/19/2018

** 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 = 49511.699 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

FLOW PROCESS FROM NODE 119.00 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.502 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.543
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.355 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE = 0.304; 30-MINUTE = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.441 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.549
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 0.796 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.543 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.418
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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.478 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.299; 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 = 0.359; 1-HOUR = 0.405
3-HOUR = 0.751; 6-HOUR = 0.890; 24-HOUR = 0.936

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

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

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

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

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

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

Table with columns: TIME (2) TO, UPSTREAM, DOWNSTREAM, MAX. STORAGE, HYDROLOGIC/HYDRAULIC PROCESS, PEAK (CFS), FOOTNOTES. Includes summary header: * AES FLOODSCx PROGRAM RESULTS SUMMARY * and input filename: [EV0034UF.DAT].

13305.00	133.00	Convex Routing:	Stream #2	1517.0	1506.4
17.500					
+-----+-----+-----+-----+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	819.1
16.583					
133.00	133.00	Stream #3 Added to:	Stream #2	1506.4	2076.9
17.417					
133.00	133.00	Zero Out:	Stream #3	819.1	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	19671.7	21744.6
17.500					
133.00	133.00	Zero Out:	Stream #2	2076.9	0.0
+-----+-----+-----+-----+-----+					
133.00	134.00	Convex Routing:	Stream #1	21744.6	21727.8
17.583					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	459.6
16.583					
134.00	134.00	Stream #2 Added to:	Stream #1	21727.8	22000.4
17.583					
134.00	134.00	Zero Out:	Stream #2	459.6	0.0
134.00	134.00	View:	Stream #1		22000.4
17.583	18205.50	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

FLOOD ROUTING ANALYSIS
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 *
* EXISTING CONDITION - REGIONAL NODE 134C *
* 100-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV0034CF.DAT
TIME/DATE OF STUDY: 10:30 07/19/2018

** 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 = 49511.699 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 119.00 TO NODE 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
SPECIFIED PEAK RAINFALL DEPTHS (INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 126.00 TO NODE 126.00 IS CODE = 7

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

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

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

FLOW PROCESS FROM NODE 126.00 TO NODE 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.502 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.543
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====

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

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

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

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

WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.355 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1

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

WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.441 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.549
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 7

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

FLOW PROCESS FROM NODE 129.00 TO NODE 129.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 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 = 0.796 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.244; LOW LOSS FRACTION = 0.515
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

FLOW PROCESS FROM NODE 132.00 TO NODE 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.543 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.418
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

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

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

FLOW PROCESS FROM NODE 133.00 TO NODE 134.00 IS CODE = 5.2

>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<

THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.478 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

WATERSHED AREA = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.250 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; 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 = 0.294; 30-MINUTE = 0.352; 1-HOUR = 0.397
3-HOUR = 0.741; 6-HOUR = 0.887; 24-HOUR = 0.933

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

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

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

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

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

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

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [EV0034CF.DAT]

Page: 1 of 1

UPSTREAM TIME (2) TO NODE # PEAK (HR)	DOWNSTREAM MAX. STORAGE NODE # MODELED (AF)	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)	FOOTNOTES
--	--	------------------------------	------------------------	--------------------------	-----------

10100.00	119.00	Subarea (UH) Added to Stream #1	0.0	18999.6	
18.000					
119.00	126.00	Convex Routing: Stream #1	18999.6	18900.8	
18.083					
119.00	126.00	Subarea (UH) Added to Stream #2	0.0	438.5	
16.333					
126.00	126.00	Stream #2 Added to: Stream #1	18900.8	19039.0	
18.083					
126.00	126.00	Zero Out: Stream #2	438.5	0.0	
126.00	127.00	Convex Routing: Stream #1	19039.0	18968.4	
18.250					
126.00	127.00	Subarea (UH) Added to Stream #2	0.0	524.0	
16.583					
127.00	127.00	Stream #2 Added to: Stream #1	18968.4	19187.1	
18.250					
127.00	127.00	Zero Out: Stream #2	524.0	0.0	
127.00	129.00	Convex Routing: Stream #1	19187.1	19149.8	
18.333					
50150.00	127.00	Subarea (UH) Added to Stream #2	0.0	435.3	
16.417					
127.00	127.00	Stream #2 Added to: Stream #1	19149.8	19289.5	
18.333					
127.00	127.00	Zero Out: Stream #2	435.3	0.0	
127.00	129.00	Subarea (UH) Added to Stream #2	0.0	343.2	
16.500					
129.00	129.00	Stream #2 Added to: Stream #1	19289.5	19449.7	
17.417					
129.00	129.00	Zero Out: Stream #2	343.2	0.0	
129.00	133.00	Convex Routing: Stream #1	19449.7	19440.5	
17.417					
13010.00	132.00	Subarea (UH) Added to Stream #2	0.0	1518.6	
16.833					
132.00	13305.00	Convex Routing: Stream #2	1518.6	1474.0	
17.250					

13305.00	133.00	Convex Routing: Stream #2	1474.0	1464.1	
17.500					
132.00	133.00	Subarea (UH) Added to Stream #3	0.0	797.3	
16.583					
133.00	133.00	Stream #3 Added to: Stream #2	1464.1	2029.4	
17.417					
133.00	133.00	Zero Out: Stream #3	797.3	0.0	
133.00	133.00	Stream #2 Added to: Stream #1	19440.5	21469.9	
17.417					
133.00	133.00	Zero Out: Stream #2	2029.4	0.0	
133.00	134.00	Convex Routing: Stream #1	21469.9	21456.5	
17.583					
133.00	134.00	Subarea (UH) Added to Stream #2	0.0	446.5	
16.583					
134.00	134.00	Stream #2 Added to: Stream #1	21456.5	21728.9	
17.583					
134.00	134.00	Zero Out: Stream #2	446.5	0.0	
13500.00	134.00	Subarea (UH) Added to Stream #2	0.0	1239.8	
17.250					
134.00	134.00	Stream #2 Added to: Stream #1	21728.9	22932.8	
17.500					
134.00	134.00	Zero Out: Stream #2	1239.8	0.0	
134.00	134.00	View: Stream #1		22932.8	
17.500	18982.77	3			

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

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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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 *
* EXISTING CONDITION - REGIONAL NODE 137 *
* 100-YR EV JULY 2018 ROKAMOTO *

FILE NAME: EV00137F.DAT
TIME/DATE OF STUDY: 10:29 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

```

=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.502 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.543
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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.355 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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```

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

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.441 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.549
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 = 0.796 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.543 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.418
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.478 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; 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 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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.250 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; 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 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 = 1238.800 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) = 0.280; LOW LOSS FRACTION = 0.433
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

13305.00	133.00	Convex Routing:	Stream #2	1462.0	1452.3
17.500					
+-----+					
132.00	133.00	Subarea (UH) Added to Stream #3		0.0	791.2
16.583					
133.00	133.00	Stream #3 Added to:	Stream #2	1452.3	2016.1
17.417					
133.00	133.00	Zero Out:	Stream #3	791.2	0.0
133.00	133.00	Stream #2 Added to:	Stream #1	19371.6	21387.7
17.417					
133.00	133.00	Zero Out:	Stream #2	2016.1	0.0
+-----+					
133.00	134.00	Convex Routing:	Stream #1	21387.7	21373.9
17.583					
133.00	134.00	Subarea (UH) Added to Stream #2		0.0	442.9
16.583					
134.00	134.00	Stream #2 Added to:	Stream #1	21373.9	21646.2
17.583					
134.00	134.00	Zero Out:	Stream #2	442.9	0.0
13500.00	134.00	Subarea (UH) Added to Stream #2		0.0	1232.4
17.250					
+-----+					
134.00	134.00	Stream #2 Added to:	Stream #1	21646.2	22845.3
17.500					
134.00	134.00	Zero Out:	Stream #2	1232.4	0.0
134.00	137.00	Convex Routing:	Stream #1	22845.3	22827.9
17.667					
134.00	137.00	Subarea (UH) Added to Stream #2		0.0	505.8
16.417					
137.00	137.00	Stream #2 Added to:	Stream #1	22827.9	23080.4
17.667					
+-----+					
137.00	137.00	Zero Out:	Stream #2	505.8	0.0
137.00	137.00	View:	Stream #1		23080.4
17.667	19210.95	3			
+-----+					
+-----+					
Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT					
INTERVAL					
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF					
THE DESIGN STORM					
+-----+					
+-----+					

END OF FLOODSCx ROUTING ANALYSIS

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

Michael Baker International
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Santa Ana, CA
92707

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - FREE DRAINING UH *
* EXISTING CONDITION - REGIONAL NODE 138 *
* 100-YR EV SEPT 2017 JMITAL *

FILE NAME: EV00138F.DAT
TIME/DATE OF STUDY: 10:28 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.502 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.543
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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00

=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.355 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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```

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

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.441 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.549
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).

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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 = 0.796 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.543 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.418
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.478 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; 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 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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.250 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; 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 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 = 1238.800 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) = 0.280; LOW LOSS FRACTION = 0.433
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 = 1332.600 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) = 0.265; LOW LOSS FRACTION = 0.435
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 1

UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	18826.5
18.000					
119.00	126.00		Convex Routing: Stream #1	18826.5	18728.1
18.083					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	429.7
16.333					
126.00	126.00		Stream #2 Added to: Stream #1	18728.1	18867.4
18.083					
126.00	126.00		Zero Out: Stream #2	429.7	0.0
126.00	127.00		Convex Routing: Stream #1	18867.4	18799.7
18.250					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	514.6
16.583					
127.00	127.00		Stream #2 Added to: Stream #1	18799.7	19019.9
18.250					
127.00	127.00		Zero Out: Stream #2	514.6	0.0
127.00	129.00		Convex Routing: Stream #1	19019.9	18981.6
18.333					
50150.00	127.00		Subarea (UH) Added to Stream #2	0.0	427.1
16.417					
127.00	127.00		Stream #2 Added to: Stream #1	18981.6	19122.3
18.333					
127.00	127.00		Zero Out: Stream #2	427.1	0.0
127.00	129.00		Subarea (UH) Added to Stream #2	0.0	336.9
16.500					
129.00	129.00		Stream #2 Added to: Stream #1	19122.3	19305.2
17.333					
129.00	129.00		Zero Out: Stream #2	336.9	0.0
129.00	133.00		Convex Routing: Stream #1	19305.2	19300.2
17.417					
13010.00	132.00		Subarea (UH) Added to Stream #2	0.0	1493.1
16.833					
132.00	13305.00		Convex Routing: Stream #2	1493.1	1449.4
17.250					

13305.00	133.00		Convex Routing: Stream #2	1449.4	1439.6
17.500					
132.00	133.00		Subarea (UH) Added to Stream #3	0.0	784.7
16.583					
133.00	133.00		Stream #3 Added to: Stream #2	1439.6	2001.8
17.417					
133.00	133.00		Zero Out: Stream #3	784.7	0.0
133.00	133.00		Stream #2 Added to: Stream #1	19300.2	21302.0
17.417					
133.00	133.00		Zero Out: Stream #2	2001.8	0.0
133.00	134.00		Convex Routing: Stream #1	21302.0	21287.9
17.583					
133.00	134.00		Subarea (UH) Added to Stream #2	0.0	439.0
16.583					
134.00	134.00		Stream #2 Added to: Stream #1	21287.9	21560.1
17.583					
134.00	134.00		Zero Out: Stream #2	439.0	0.0
13500.00	134.00		Subarea (UH) Added to Stream #2	0.0	1224.7
17.250					
134.00	134.00		Stream #2 Added to: Stream #1	21560.1	22753.7
17.500					
134.00	134.00		Zero Out: Stream #2	1224.7	0.0
134.00	137.00		Convex Routing: Stream #1	22753.7	22736.2
17.667					
134.00	137.00		Subarea (UH) Added to Stream #2	0.0	501.4
16.417					
137.00	137.00		Stream #2 Added to: Stream #1	22736.2	22989.2
17.667					
137.00	137.00		Zero Out: Stream #2	501.4	0.0
137.00	138.00		Convex Routing: Stream #1	22989.2	22967.4
17.833					
137.00	138.00		Subarea (UH) Added to Stream #2	0.0	490.4
16.583					
138.00	138.00		Stream #2 Added to: Stream #1	22967.4	23249.3
17.750					
138.00	138.00		Zero Out: Stream #2	490.4	0.0

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

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|
| * 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 |
-----+-----+-----+-----+
| 138.00 138.00| View: Stream #1| 23249.3|
17.750 | 19456.52| 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

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 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 *
* EXISTING CONDITION - REGIONAL NODE 139 *
* 100-YR EV SEPT 2017 ASUN *

FILE NAME: EV00139F.DAT
TIME/DATE OF STUDY: 09:49 07/19/2018

** 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 = 49511.699 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 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) = 341.63; DOWNSTREAM ELEVATION (FT) = 286.00

CHANNEL LENGTH (FT) = 6204.49 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 119.00 TO NODE 126.00 IS CODE = 1

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

WATERSHED AREA = 1006.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.284 HOURS
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.297; LOW LOSS FRACTION = 0.557
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 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) = 286.00; DOWNSTREAM ELEVATION (FT) = 240.00
CHANNEL LENGTH (FT) = 7190.71 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE (CFS) = 0.00

FLOW PROCESS FROM NODE 126.00 TO NODE 127.00 IS CODE = 1

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

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=====
WATERSHED AREA = 1562.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.502 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; LOW LOSS FRACTION = 0.543
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 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 5.2
-----
>>>>MODEL CHANNEL ROUTING OF STREAM #1 BY THE CONVEX METHOD<<<<<
=====
THE MODIFIED C-ROUTING COEFFICIENT IS ESTIMATED IN ORDER TO
ROUTE THE STREAM 1 INFLOW HYDROGRAPH BY 5-MINUTE INTERVALS
(Reference: the National Engineering Handbook, Hydrology,
Chapter 17, page 17-52, August,1972, U.S. Department of Commerce).

ASSUMED REGULAR CHANNEL INFORMATION:
BASEWIDTH(FT) = 200.00 CHANNEL Z = 5.00
UPSTREAM ELEVATION(FT) = 240.00; DOWNSTREAM ELEVATION(FT) = 213.00
CHANNEL LENGTH(FT) = 4905.40 MANNING'S FACTOR = 0.030
CONSTANT LOSS RATE(CFS) = 0.00
=====

*****
FLOW PROCESS FROM NODE 50150.00 TO NODE 127.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 1066.400 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.355 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.295; LOW LOSS FRACTION = 0.491
SPECIFIED PEAK RAINFALL DEPTHS(INCH):
5-MINUTE = 0.40; 30-MINUTE = 0.87; 1-HOUR = 1.15
3-HOUR = 1.94; 6-HOUR = 2.71; 24-HOUR = 4.49
*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

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

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 7
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 127.00 IS CODE = 6
-----
>>>>STREAM NUMBER 2 CLEARED AND SET TO ZERO<<<<<
=====

*****
FLOW PROCESS FROM NODE 127.00 TO NODE 129.00 IS CODE = 1
-----
>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #2<<<<<
=====
WATERSHED AREA = 966.300 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.441 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.291; LOW LOSS FRACTION = 0.549
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).

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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 = 0.796 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 = 2190.200 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.543 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.300; LOW LOSS FRACTION = 0.418
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 = 1243.600 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.478 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.299; 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 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 = 4082.800 ACRES; BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 1.250 HOURS
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.294; 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 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 = 1238.800 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) = 0.280; LOW LOSS FRACTION = 0.433
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 = 1332.600 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) = 0.265; LOW LOSS FRACTION = 0.435
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 = 427.800 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) = 0.207; 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 *

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UPSTREAM TIME (2)	DOWNSTREAM TIME (2)	MAX. STORAGE	HYDROLOGIC/HYDRAULIC PROCESS	UPSTREAM PEAK (CFS)	DOWNSTREAM PEAK (CFS)
NODE #	MODELED (AF)	FOOTNOTES			
10100.00	119.00		Subarea (UH) Added to Stream #1	0.0	18801.3
18.000					
119.00	126.00		Convex Routing: Stream #1	18801.3	18704.1
18.083					
119.00	126.00		Subarea (UH) Added to Stream #2	0.0	428.1
16.333					
126.00	126.00		Stream #2 Added to: Stream #1	18704.1	18843.6
18.083					
126.00	126.00		Zero Out: Stream #2	428.1	0.0
126.00	127.00		Convex Routing: Stream #1	18843.6	18775.8
18.250					
126.00	127.00		Subarea (UH) Added to Stream #2	0.0	513.0
16.583					
127.00	127.00		Stream #2 Added to: Stream #1	18775.8	18996.3
18.250					
127.00	127.00		Zero Out: Stream #2	513.0	0.0
127.00	129.00		Convex Routing: Stream #1	18996.3	18958.1
18.333					
50150.00	127.00		Subarea (UH) Added to Stream #2	0.0	425.6
16.417					
127.00	127.00		Stream #2 Added to: Stream #1	18958.1	19098.9
18.333					
127.00	127.00		Zero Out: Stream #2	425.6	0.0
127.00	129.00		Subarea (UH) Added to Stream #2	0.0	335.8
16.500					
129.00	129.00		Stream #2 Added to: Stream #1	19098.9	19285.7
17.333					
129.00	129.00		Zero Out: Stream #2	335.8	0.0
129.00	133.00		Convex Routing: Stream #1	19285.7	19280.7
17.417					
13010.00	132.00		Subarea (UH) Added to Stream #2	0.0	1488.9
16.833					
132.00	13305.00		Convex Routing: Stream #2	1488.9	1445.2
17.250					

13305.00	133.00		Convex Routing: Stream #2	1445.2	1435.5
17.500					
132.00	133.00		Subarea (UH) Added to Stream #3	0.0	782.6
16.583					
133.00	133.00		Stream #3 Added to: Stream #2	1435.5	1996.8
17.500					
133.00	133.00		Zero Out: Stream #3	782.6	0.0
133.00	133.00		Stream #2 Added to: Stream #1	19280.7	21277.4
17.417					
133.00	133.00		Zero Out: Stream #2	1996.8	0.0
133.00	134.00		Convex Routing: Stream #1	21277.4	21263.6
17.583					
133.00	134.00		Subarea (UH) Added to Stream #2	0.0	437.8
16.583					
134.00	134.00		Stream #2 Added to: Stream #1	21263.6	21535.7
17.583					
134.00	134.00		Zero Out: Stream #2	437.8	0.0
13500.00	134.00		Subarea (UH) Added to Stream #2	0.0	1222.5
17.250					
134.00	134.00		Stream #2 Added to: Stream #1	21535.7	22727.8
17.500					
134.00	134.00		Zero Out: Stream #2	1222.5	0.0
134.00	137.00		Convex Routing: Stream #1	22727.8	22710.3
17.667					
134.00	137.00		Subarea (UH) Added to Stream #2	0.0	499.9
16.417					
137.00	137.00		Stream #2 Added to: Stream #1	22710.3	22963.4
17.667					
137.00	137.00		Zero Out: Stream #2	499.9	0.0
137.00	138.00		Convex Routing: Stream #1	22963.4	22941.5
17.833					
137.00	138.00		Subarea (UH) Added to Stream #2	0.0	489.0
16.583					
138.00	138.00		Stream #2 Added to: Stream #1	22941.5	23223.8
17.750					
138.00	138.00		Zero Out: Stream #2	489.0	0.0

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

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|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [EV00139F.DAT ]
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-----+-----+-----+-----+
|UPSTREAM DOWNSTREAM| | UPSTREAM DOWNSTREAM|
TIME (2) TO | MAX. STORAGE| |
| NODE # NODE # | HYDROLOGIC/HYDRAULIC PROCESS | PEAK (CFS) PEAK (CFS)|
PEAK (HR) | MODELED (AF)| FOOTNOTES |
-----+-----+-----+-----+
| 138.00 139.00| Convex Routing: Stream #1| 23223.8 23217.9|
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| 23217.9 23298.5|
17.833 | | |
| 139.00 139.00| Zero Out: Stream #2| 227.3 0.0|
| | | |
| 139.00 139.00| View: Stream #1| 23298.5|
17.833 | 19538.87| 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 |
-----+-----+-----+-----+

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END OF FLOODSCx ROUTING ANALYSIS