
FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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Ver. 23.0 Release Date: 07/01/2016 License ID 1264

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - COMPLEX UH *
* ULTIMATE CONDITION - LOCAL AREA A *
* 100-YR EV AUGUST 2019 ROKAMOTO *

FILE NAME: 3A00EVC.DAT
TIME/DATE OF STUDY: 09:38 08/26/2019

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 100.00 TO NODE 130.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 447.00
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.107
LOW LOSS FRACTION = 0.253
TIME OF CONCENTRATION (MIN.) = 20.64
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 25
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.40
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.87
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.15
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.94
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.71
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.49

FLOW PROCESS FROM NODE 130.00 TO NODE 131.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing increasing flow rates.

FLOW EXCESS IS ASSUMED TO BE PERMANENTLY STORED.

FLOW PROCESS FROM NODE 130.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing increasing flow rates.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-2 showing depth and storage information.

3	2.00	2.01	6.100
4	3.00	2.02	8.000
5	4.00	43.00	10.000
6	5.00	45.00	11.900

 FLOW PROCESS FROM NODE 130.00 TO NODE 133.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<<

MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	16.00
2	100.00	31.00
3	250.00	69.00
4	500.00	70.00
5	1000.00	75.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 4

 FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	3.00	2.700
3	2.00	3.01	3.800
4	3.00	9.00	5.100
5	4.00	71.00	6.200
6	5.00	75.00	7.600

 FLOW PROCESS FROM NODE 130.00 TO NODE 9.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	50.00
2	100.00	100.00
3	250.00	250.00
4	550.00	445.00
5	700.00	450.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 2

 FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 7

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

 FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 6

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

 FLOW PROCESS FROM NODE 130.00 TO NODE 134.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	14.00
2	100.00	23.00
3	250.00	23.50
4	500.00	24.00
5	1200.00	25.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

 FLOW PROCESS FROM NODE 134.00 TO NODE 135.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4
 THROUGH A FLOW-THROUGH DETENTION BASIN.
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
 DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	2.00	3.100
3	2.00	2.01	4.300
4	3.00	7.00	5.500
5	4.00	25.00	6.900
6	5.00	30.00	8.300

=====

 FLOW PROCESS FROM NODE 132.00 TO NODE 135.00 IS CODE = 7

>>>>STREAM NUMBER 1 ADDED TO STREAM NUMBER 4<<<<<

=====

 FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

>>>>STREAM NUMBER 1 CLEARED AND SET TO ZERO<<<<<

=====

 FLOW PROCESS FROM NODE 133.00 TO NODE 135.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 4<<<<<

=====

 FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

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

=====

 FLOW PROCESS FROM NODE 136.00 TO NODE 137.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
 THROUGH A FLOW-THROUGH DETENTION BASIN.
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
 DEAD STORAGE (AF) = 0.000
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	83.00	4.300
3	2.00	380.00	8.900
4	3.00	400.00	13.300
5	4.00	478.00	18.000
6	5.00	600.00	23.100

=====

 FLOW PROCESS FROM NODE 136.00 TO NODE 136.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #5<<<<<

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MODEL STREAM NUMBER 5 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 5 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	5.00	2.00
2	25.00	2.01
3	75.00	2.02
4	250.00	2.03
5	500.00	84.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

=====

 FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 3.2

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

=====

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	48.00	2.100
3	2.00	196.00	4.312
4	3.00	225.00	6.636
5	4.00	301.00	9.075
6	5.00	378.00	11.630

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*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.10 IS CODE = 2
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>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
      DATA PAIR      Qcenter      Qpass
      NUMBER          (CFS)        (CFS)
      -                0.00         0.00
      1                 5.00         2.00
      2                10.00         2.00
      3                 50.00         3.00
      4                100.00        34.00
      5                325.00        127.00
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 1
=====
*****
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 3.2
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

      INTERVAL    DEPTH    OUTFLOW    STORAGE
      NUMBER      (FT)    (CFS)     (AF)
      1           0.00     0.00     0.000
      2           1.00    21.00     2.000
      3           2.00   114.00    4.200
      4           3.00   131.00    6.400
      5           4.00   176.00    8.800
      6           5.00   221.00   11.200
=====
*****
FLOW PROCESS FROM NODE 135.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<

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*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 13305.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 150.00 TO NODE 13305.00 IS CODE = 1.2
-----
>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH) ADDED TO STREAM #3<<<<

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 62.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.702
LOW LOSS FRACTION = 0.488
TIME OF CONCENTRATION (MIN.) = 23.28
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 25
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.40
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.87
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.15
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.94
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.71
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.49

*****
FLOW PROCESS FROM NODE 130.00 TO NODE 13305.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
=====

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FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 11

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

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+-----+
+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3A00EVC.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 |
+-----+
| 100.00    130.00| Subarea (UH) Added to Stream #1|      0.0    822.1|
16.350 |          | 4 |
| 130.00    131.00| Flowby Basin Model: Stream #1|    822.1    807.1|
16.350 |          |
| 130.00    132.00| Flowby Basin Model: Stream #1|    807.1    85.1|
16.350 |          |
| 132.00    132.00| Flow-Through Basin: Stream #1|    85.1    43.5|
16.583 | 10.49|
| 130.00    133.00| Flowby Basin Model: Stream #3|    722.0    72.2|
16.350 |          |
+-----+
| 133.00    133.00| Flow-Through Basin: Stream #3|    72.2    68.6|
16.617 | 6.16|
| 130.00     9.00| Flowby Basin Model: Stream #4|    649.8    448.3|
16.350 |          |
| 9.00     9.00| Stream #2 Added to: Stream #3|    68.6    266.6|
16.350 |          |
| 9.00     9.00| Zero Out: Stream #2|    201.5    0.0|
|          |
| 130.00    134.00| Flowby Basin Model: Stream #4|    448.3    23.9|
16.350 |          |
+-----+
| 134.00    135.00| Flow-Through Basin: Stream #4|    23.9    15.9|
16.850 | 6.19|
| 132.00    135.00| Stream #1 Added to: Stream #4|    15.9    59.2|
16.800 |          |
| 135.00    135.00| Zero Out: Stream #1|    43.5    0.0|
|          |
| 133.00    135.00| Stream #3 Added to: Stream #4|    59.2    321.9|
16.350 |          |
| 135.00    135.00| Zero Out: Stream #3|    266.6    0.0|
|          |
+-----+
| 136.00    137.00| Flow-Through Basin: Stream #5|    424.4    345.4|
16.483 | 8.37|
| 136.00    136.00| Flowby Basin Model: Stream #5|    345.4    33.3|
16.483 |          |
| 137.00    138.00| Flow-Through Basin: Stream #3|    312.1    220.3|
16.700 | 6.27|
| 137.00    137.10| Flowby Basin Model: Stream #3|    220.3    83.7|
16.700 |          |

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138.00	139.00	Flow-Through Basin:	Stream #1	136.6	116.2
17.017	4.49				
+-----+					
135.00	139.00	Stream #5 Added to:	Stream #1	116.2	118.2
17.017					
| 139.00	139.00	Zero Out:	Stream #5	33.3	0.0
| 139.00	139.00	Stream #3 Added to:	Stream #1	118.2	199.2
16.583					
| 139.00	139.00	Zero Out:	Stream #3	83.7	0.0
| 139.00	139.00	Stream #4 Added to:	Stream #1	199.2	452.4
16.350					
+-----+					
| 139.00	13305.00	Zero Out:	Stream #4	321.9	0.0
| 150.00	13305.00	Subarea (UH) Added to	Stream #3	0.0	73.6
16.400		4			
| 130.00	13305.00	Stream #3 Added to:	Stream #1	452.4	519.5
16.350					
| 13305.00	13305.00	Zero Out:	Stream #3	73.6	0.0
| 13305.00	13305.00	View:	Stream #1		519.5
16.350	121.22	3			
+-----+					
+-----+					
+-----+					
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT					
INTERVAL					
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF					
THE DESIGN STORM					
| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS					
GREATER THAN 1 SQ MI					
+-----+					
+-----+					

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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Ver. 23.0 Release Date: 07/01/2016 License ID 1264

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - COMPLEX UH *
* ULTIMATE CONDITION - LOCAL AREA C *
* 2-YR EV AUGUST 2019 ROKAMOTO *

FILE NAME: 3A02EVC.DAT
TIME/DATE OF STUDY: 10:28 08/26/2019

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 100.00 TO NODE 130.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 447.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.213
LOW LOSS FRACTION = 0.431
TIME OF CONCENTRATION (MIN.) = 25.47
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 2
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.13
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.28
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.37
3-HOUR POINT RAINFALL VALUE (INCHES) = 0.62
6-HOUR POINT RAINFALL VALUE (INCHES) = 0.85
24-HOUR POINT RAINFALL VALUE (INCHES) = 1.44

FLOW PROCESS FROM NODE 130.00 TO NODE 131.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow rates increasing from 10.00 to 550.00 CFS.

FLOW EXCESS IS ASSUMED TO BE PERMANENTLY STORED.

FLOW PROCESS FROM NODE 130.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow rates increasing from 50.00 to 1200.00 CFS.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-2 showing depth increasing from 0.00 to 1.00 FT.

3	2.00	2.01	6.100
4	3.00	2.02	8.000
5	4.00	43.00	10.000
6	5.00	45.00	11.900

 FLOW PROCESS FROM NODE 130.00 TO NODE 133.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<<

MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	16.00
2	100.00	31.00
3	250.00	69.00
4	500.00	70.00
5	1000.00	75.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 4

 FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	3.00	2.700
3	2.00	3.01	3.800
4	3.00	9.00	5.100
5	4.00	71.00	6.200
6	5.00	75.00	7.600

 FLOW PROCESS FROM NODE 130.00 TO NODE 9.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	50.00
2	100.00	100.00
3	250.00	250.00
4	550.00	445.00
5	750.00	450.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 2

 FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 7

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

STREAM 2 IS ZERO...STREAM NOW DEFINED AS ZERO

 FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 6

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

 FLOW PROCESS FROM NODE 130.00 TO NODE 134.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	14.00
2	100.00	23.00
3	250.00	24.00
4	500.00	24.00
5	1200.00	25.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

 FLOW PROCESS FROM NODE 134.00 TO NODE 135.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4
 THROUGH A FLOW-THROUGH DETENTION BASIN.
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	2.00	3.100
3	2.00	2.01	4.300
4	3.00	7.00	5.500
5	4.00	25.00	6.900
6	5.00	30.00	8.300

 FLOW PROCESS FROM NODE 132.00 TO NODE 135.00 IS CODE = 7

 >>>>STREAM NUMBER 1 ADDED TO STREAM NUMBER 4<<<<<<
 =====

 FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

 >>>>STREAM NUMBER 1 CLEARED AND SET TO ZERO<<<<<<
 =====

 FLOW PROCESS FROM NODE 133.00 TO NODE 135.00 IS CODE = 7

 >>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 4<<<<<<
 =====

 FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

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

 FLOW PROCESS FROM NODE 136.00 TO NODE 137.00 IS CODE = 3.2

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	83.00	4.300
3	2.00	380.00	8.900
4	3.00	400.00	13.300
5	4.00	478.00	18.000
6	5.00	600.00	23.100

 FLOW PROCESS FROM NODE 136.00 TO NODE 136.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #5<<<<<<
 =====

MODEL STREAM NUMBER 5 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 5 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	5.00	2.00
2	25.00	2.00
3	75.00	2.00
4	250.00	2.00
5	500.00	84.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3
 =====

 FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	48.00	2.100
3	2.00	196.00	4.300
4	3.00	225.00	6.400
5	4.00	301.00	9.100
6	5.00	378.00	11.600

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*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.10 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<
-----
MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
      DATA PAIR      Qcenter      Qpass
      NUMBER          (CFS)        (CFS)
      -              0.00         0.00
      1              5.00         2.00
      2             10.00         2.00
      3             50.00         3.00
      4            100.00        34.00
      5            325.00       127.00
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 1
-----
*****
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 3.2
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<
-----
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

      INTERVAL      DEPTH      OUTFLOW      STORAGE
      NUMBER        (FT)        (CFS)        (AF)
      1             0.00         0.00         0.000
      2             1.00        21.00         2.000
      3             2.00       114.00         4.200
      4             3.00       131.00         6.400
      5             4.00       176.00         8.800
      6             5.00       221.00        11.200
-----
*****
FLOW PROCESS FROM NODE 135.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 1<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----

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>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 1<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 13305.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
-----
*****
FLOW PROCESS FROM NODE 150.00 TO NODE 13305.00 IS CODE = 1.2
-----
>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH) ADDED TO STREAM #3<<<<

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 62.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.404
LOW LOSS FRACTION = 0.835
TIME OF CONCENTRATION (MIN.) = 35.22
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 2
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.13
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.28
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.37
3-HOUR POINT RAINFALL VALUE (INCHES) = 0.62
6-HOUR POINT RAINFALL VALUE (INCHES) = 0.85
24-HOUR POINT RAINFALL VALUE (INCHES) = 1.44

*****
FLOW PROCESS FROM NODE 130.00 TO NODE 13305.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
-----

```

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 11

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

-----+
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|

| INPUT FILENAME: [3A02EVC.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 |

| 100.00	130.00	Subarea (UH) Added to Stream #1	0.0	161.9
16.433	|	4		
| 130.00	131.00	Flowby Basin Model: Stream #1	161.9	103.0
16.433	|	|		
| 130.00	132.00	Flowby Basin Model: Stream #1	103.0	31.1
16.433	|	|		
| 132.00	132.00	Flow-Through Basin: Stream #1	31.1	2.0
19.500	4.34	|		
| 130.00	133.00	Flowby Basin Model: Stream #3	72.0	22.6
16.433	|	|		
| 133.00	133.00	Flow-Through Basin: Stream #3	22.6	2.3
17.683	2.07	|		
| 130.00	9.00	Flowby Basin Model: Stream #4	49.4	49.4
16.433	|	|		
| 9.00	9.00	Zero Out: Stream #2	0.0	0.0
| 130.00	134.00	Flowby Basin Model: Stream #4	49.4	13.8
16.433	|	|		
| 134.00	135.00	Flow-Through Basin: Stream #4	13.8	0.9
18.467	1.43	|		
| 132.00	135.00	Stream #1 Added to: Stream #4	0.9	2.9
18.467	|	|		
| 135.00	135.00	Zero Out: Stream #1	2.0	0.0
| 133.00	135.00	Stream #3 Added to: Stream #4	2.9	5.2
18.217	|	|		
| 135.00	135.00	Zero Out: Stream #3	2.3	0.0
| 136.00	137.00	Flow-Through Basin: Stream #5	35.6	18.2
16.667	0.94	|		
| 136.00	136.00	Flowby Basin Model: Stream #5	18.2	2.0
15.450	|	|		
| 137.00	138.00	Flow-Through Basin: Stream #3	16.2	11.7
17.050	0.51	|		
| 137.00	137.10	Flowby Basin Model: Stream #3	11.7	2.0
17.050	|	|		
| 138.00	139.00	Flow-Through Basin: Stream #1	9.7	6.1
17.800	0.58	|		

|	135.00	139.00	|	Stream #5 Added to:	Stream #1	6.1	8.1	|
17.800	|	|	|					
+-----+-----+-----+-----+-----+								
|	139.00	139.00	|	Zero Out:	Stream #5	2.0	0.0	|
|	139.00	139.00	|	Stream #3 Added to:	Stream #1	8.1	10.1	|
17.800	|	|	|					
|	139.00	139.00	|	Zero Out:	Stream #3	2.0	0.0	|
|	139.00	139.00	|	Stream #4 Added to:	Stream #1	10.1	15.3	|
17.817	|	|	|					
|	139.00	13305.00	|	Zero Out:	Stream #4	5.2	0.0	|
+-----+-----+-----+-----+-----+								
|	150.00	13305.00	|	Subarea (UH) Added to	Stream #3	0.0	5.9	|
16.600	|	|	|	4				
|	130.00	13305.00	|	Stream #3 Added to:	Stream #1	15.3	16.8	|
16.600	|	|	|					
|	13305.00	13305.00	|	Zero Out:	Stream #3	5.9	0.0	|
|	13305.00	13305.00	|	View:	Stream #1		16.8	|
16.600	|	18.19	|	3				

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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Ver. 23.0 Release Date: 07/01/2016 License ID 1264

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - COMPLEX UH *
* ULTIMATE CONDITION - LOCAL AREA C *
* 5-YR EV AUGUST 2019 ROKAMOTO *

FILE NAME: 3A05EVC.DAT
TIME/DATE OF STUDY: 10:21 08/26/2019

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 100.00 TO NODE 130.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 447.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.178
LOW LOSS FRACTION = 0.371
TIME OF CONCENTRATION (MIN.) = 23.64
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 5
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.18
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.41
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.55
3-HOUR POINT RAINFALL VALUE (INCHES) = 0.92
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.27
24-HOUR POINT RAINFALL VALUE (INCHES) = 2.12

FLOW PROCESS FROM NODE 130.00 TO NODE 131.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow rates.

FLOW EXCESS IS ASSUMED TO BE PERMANENTLY STORED.

FLOW PROCESS FROM NODE 130.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow rates.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-2 showing basin data.

3	2.00	2.01	6.100
4	3.00	2.02	8.000
5	4.00	43.00	10.000
6	5.00	45.00	11.900

 FLOW PROCESS FROM NODE 130.00 TO NODE 133.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<<

MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	16.00
2	100.00	31.00
3	250.00	69.00
4	500.00	70.00
5	1000.00	75.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 4

 FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	3.00	2.700
3	2.00	3.01	3.800
4	3.00	9.00	5.100
5	4.00	71.00	6.200
6	5.00	75.00	7.600

 FLOW PROCESS FROM NODE 130.00 TO NODE 9.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	50.00
2	100.00	100.00
3	250.00	250.00
4	550.00	445.00
5	750.00	450.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 2

 FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 7

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

STREAM 2 IS ZERO...STREAM NOW DEFINED AS ZERO

 FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 6

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

 FLOW PROCESS FROM NODE 130.00 TO NODE 134.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	14.00
2	100.00	23.00
3	250.00	24.00
4	500.00	24.00
5	1200.00	25.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

 FLOW PROCESS FROM NODE 134.00 TO NODE 135.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4
 THROUGH A FLOW-THROUGH DETENTION BASIN.
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	2.00	3.100
3	2.00	2.01	4.300
4	3.00	7.00	5.500
5	4.00	25.00	6.900
6	5.00	30.00	8.300

 FLOW PROCESS FROM NODE 132.00 TO NODE 135.00 IS CODE = 7

>>>>STREAM NUMBER 1 ADDED TO STREAM NUMBER 4<<<<<

 FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

>>>>STREAM NUMBER 1 CLEARED AND SET TO ZERO<<<<<

 FLOW PROCESS FROM NODE 133.00 TO NODE 135.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 4<<<<<

 FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

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

 FLOW PROCESS FROM NODE 136.00 TO NODE 137.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
 THROUGH A FLOW-THROUGH DETENTION BASIN.
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
 DEAD STORAGE (AF) = 0.000
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	83.00	4.300
3	2.00	380.00	8.900
4	3.00	400.00	13.300
5	4.00	478.00	18.000
6	5.00	600.00	23.100

 FLOW PROCESS FROM NODE 136.00 TO NODE 136.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #5<<<<<

MODEL STREAM NUMBER 5 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 5 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	5.00	2.00
2	25.00	2.00
3	75.00	2.00
4	250.00	2.00
5	500.00	84.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

 FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	48.00	2.100
3	2.00	196.00	4.300
4	3.00	225.00	6.400
5	4.00	301.00	9.100
6	5.00	378.00	11.600

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.10 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<
-----
MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
      DATA PAIR      Qcenter      Qpass
      NUMBER          (CFS)          (CFS)
      -              0.00           0.00
      1              5.00           2.00
      2              10.00          2.00
      3              50.00           3.00
      4              100.00          34.00
      5              325.00          127.00
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 1
-----
*****
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 3.2
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<
-----
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

      INTERVAL      DEPTH      OUTFLOW      STORAGE
      NUMBER        (FT)      (CFS)      (AF)
      1             0.00       0.00       0.000
      2             1.00       21.00      2.000
      3             2.00      114.00     4.200
      4             3.00      131.00     6.400
      5             4.00      176.00     8.800
      6             5.00      221.00    11.200
-----
*****
FLOW PROCESS FROM NODE 135.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 1<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----

```

```

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 1<<<<
-----
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 13305.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
-----
*****
FLOW PROCESS FROM NODE 150.00 TO NODE 13305.00 IS CODE = 1.2
-----
>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH) ADDED TO STREAM #3<<<<

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 62.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.504
LOW LOSS FRACTION = 0.724
TIME OF CONCENTRATION (MIN.) = 28.52
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 5
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.18
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.41
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.55
3-HOUR POINT RAINFALL VALUE (INCHES) = 0.92
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.27
24-HOUR POINT RAINFALL VALUE (INCHES) = 2.12

*****
FLOW PROCESS FROM NODE 130.00 TO NODE 13305.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
-----

```

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 11

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

-----+
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|

| INPUT FILENAME: [3A05EVC.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 |

-----+-----+-----+
| 100.00 130.00| Subarea (UH) Added to Stream #1| 0.0 304.0|
16.400 | | 4 |
| 130.00 131.00| Flowby Basin Model: Stream #1| 304.0 211.1|
16.400 | | |
| 130.00 132.00| Flowby Basin Model: Stream #1| 211.1 33.2|
16.400 | | |
| 132.00 132.00| Flow-Through Basin: Stream #1| 33.2 2.0|
22.900 | 7.09| |
| 130.00 133.00| Flowby Basin Model: Stream #3| 177.9 50.7|
16.400 | | |
-----+-----+-----+
| 133.00 133.00| Flow-Through Basin: Stream #3| 50.7 3.0|
18.167 | 3.80| |
| 130.00 9.00| Flowby Basin Model: Stream #4| 127.2 127.2|
16.400 | | |
9.00 9.00	Zero Out: Stream #2	0.0 0.0
130.00 134.00	Flowby Basin Model: Stream #4	127.2 23.2
16.400		
134.00 135.00	Flow-Through Basin: Stream #4	23.2 1.6
18.333	2.44	
-----+-----+-----+		
132.00 135.00	Stream #1 Added to: Stream #4	1.6 3.6
18.350		
135.00 135.00	Zero Out: Stream #1	2.0 0.0
133.00 135.00	Stream #3 Added to: Stream #4	3.6 6.6
18.167		
135.00 135.00	Zero Out: Stream #3	3.0 0.0
136.00 137.00	Flow-Through Basin: Stream #5	104.0 41.3
16.600	2.14	
-----+-----+-----+		
136.00 136.00	Flowby Basin Model: Stream #5	41.3 2.0
13.500		
137.00 138.00	Flow-Through Basin: Stream #3	39.3 27.1
17.000	1.19	
137.00 137.10	Flowby Basin Model: Stream #3	27.1 2.4
17.000		
138.00 139.00	Flow-Through Basin: Stream #1	24.7 15.7
17.833 | 1.49| |

|	135.00	139.00	| Stream #5 Added to:	Stream #1	15.7	17.7
17.833	|	|	|	|	|	|
+-----+-----+-----+						
|	139.00	139.00	| Zero Out:	Stream #5	2.0	0.0
|	139.00	139.00	| Stream #3 Added to:	Stream #1	17.7	19.9
17.800	|	|	|	|	|	|
|	139.00	139.00	| Zero Out:	Stream #3	2.4	0.0
|	139.00	139.00	| Stream #4 Added to:	Stream #1	19.9	26.5
17.800	|	|	|	|	|	|
|	139.00	13305.00	| Zero Out:	Stream #4	6.6	0.0
+-----+-----+-----+						
|	150.00	13305.00	| Subarea (UH) Added to	Stream #3	0.0	19.1
16.483	|	|	| 4	|	|	|
|	130.00	13305.00	| Stream #3 Added to:	Stream #1	26.5	34.2
16.483	|	|	|	|	|	|
|	13305.00	13305.00	| Zero Out:	Stream #3	19.1	0.0
|	13305.00	13305.00	| View:	Stream #1		34.2
16.483	|	31.54	| 3	|	|	|
+-----+-----+-----+						

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT
 INTERVAL
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
 THE DESIGN STORM
 | 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS
 GREATER THAN 1 SQ MI

END OF FLOODSCx ROUTING ANALYSIS

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

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - COMPLEX UH *
* ULTIMATE CONDITION - LOCAL AREA A *
* 10-YR EV AUGUST 2019 ROKAMOTO *

FILE NAME: 3A10EVC.DAT
TIME/DATE OF STUDY: 10:14 08/26/2019

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 100.00 TO NODE 130.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 447.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.107
LOW LOSS FRACTION = 0.314
TIME OF CONCENTRATION (MIN.) = 21.96
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 5
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.26
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.59
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.78
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.31
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.81
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.03

FLOW PROCESS FROM NODE 130.00 TO NODE 131.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing increasing flow values.

FLOW EXCESS IS ASSUMED TO BE PERMANENTLY STORED.

FLOW PROCESS FROM NODE 130.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing increasing flow values.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-2 showing depth and storage values.

3	2.00	2.01	6.100
4	3.00	2.02	8.000
5	4.00	43.00	10.000
6	5.00	45.00	11.900

FLOW PROCESS FROM NODE 130.00 TO NODE 133.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<<

MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	16.00
2	100.00	31.00
3	250.00	69.00
4	500.00	70.00
5	1000.00	75.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 4

FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	3.00	2.700
3	2.00	3.01	3.800
4	3.00	9.00	5.100
5	4.00	71.00	6.200
6	5.00	75.00	7.600

FLOW PROCESS FROM NODE 130.00 TO NODE 9.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	50.00
2	100.00	100.00
3	250.00	250.00
4	550.00	445.00
5	750.00	450.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 2

FLOW PROCESS FROM NODE 130.00 TO NODE 134.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	14.00
2	100.00	23.00
3	250.00	24.00
4	500.00	24.00
5	1200.00	25.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 134.00 TO NODE 135.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	2.00	3.100
3	2.00	2.01	4.300
4	3.00	7.00	5.500
5	4.00	25.00	6.900
6	5.00	30.00	8.300

```

=====
*****
FLOW PROCESS FROM NODE 132.00 TO NODE 135.00 IS CODE = 7
-----
>>>>STREAM NUMBER 1 ADDED TO STREAM NUMBER 4<<<<
=====
*****
FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6
-----
>>>>STREAM NUMBER 1 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 133.00 TO NODE 135.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 4<<<<
=====
*****
FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 136.00 TO NODE 137.00 IS CODE = 3.2
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 83.00 4.300
3 2.00 380.00 8.900
4 3.00 400.00 13.300
5 4.00 478.00 18.000
6 5.00 600.00 23.100
=====
*****

```

```

=====
FLOW PROCESS FROM NODE 136.00 TO NODE 136.00 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #5<<<<
=====
MODEL STREAM NUMBER 5 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 5 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 5.00 2.00
2 25.00 2.00
3 75.00 2.00
4 250.00 2.00
5 500.00 84.00
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3
=====
*****
FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 3.2
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL DEPTH OUTFLOW STORAGE
NUMBER (FT) (CFS) (AF)
1 0.00 0.00 0.000
2 1.00 48.00 2.100
3 2.00 196.00 4.300
4 3.00 225.00 6.400
5 4.00 301.00 9.100
6 5.00 378.00 11.600
=====
*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.10 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
DATA PAIR Qcenter Qpass
NUMBER (CFS) (CFS)
- 0.00 0.00
1 5.00 2.00
2 10.00 2.00

```

3 50.00 3.00
4 100.00 34.00
5 325.00 127.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 1

FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	21.00	2.000
3	2.00	114.00	4.200
4	3.00	131.00	6.400
5	4.00	176.00	8.800
6	5.00	221.00	11.200

FLOW PROCESS FROM NODE 135.00 TO NODE 139.00 IS CODE = 7

>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 1<<<<

FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<

FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<

FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7

>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 1<<<<

FLOW PROCESS FROM NODE 139.00 TO NODE 13305.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 150.00 TO NODE 13305.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 62.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.702
LOW LOSS FRACTION = 0.612
TIME OF CONCENTRATION (MIN.) = 25.15
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 5
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.26
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.59
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.78
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.31
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.81
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.03

FLOW PROCESS FROM NODE 130.00 TO NODE 13305.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 11

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

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+-----+
+-----+
|
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3A10EVC.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 |
+-----+
+-----+
| 100.00    130.00| Subarea (UH) Added to Stream #1|      0.0    519.9|
16.367 |          | 4 |
| 130.00    131.00| Flowby Basin Model: Stream #1|    519.9    415.5|
16.367 |          |
| 130.00    132.00| Flowby Basin Model: Stream #1|    415.5    49.2|
16.367 |          |
| 132.00    132.00| Flow-Through Basin: Stream #1|     49.2    18.9|
16.800 |      8.83|
| 130.00    133.00| Flowby Basin Model: Stream #3|    366.3    69.5|
16.367 |          |
+-----+
+-----+
| 133.00    133.00| Flow-Through Basin: Stream #3|     69.5    35.0|
16.617 |      5.56|
| 130.00      9.00| Flowby Basin Model: Stream #4|    296.8    280.4|
16.367 |          |
| 130.00    134.00| Flowby Basin Model: Stream #4|    280.4    24.0|
16.333 |          |
| 134.00    135.00| Flow-Through Basin: Stream #4|     24.0     2.0|
18.850 |      3.73|
| 132.00    135.00| Stream #1 Added to: Stream #4|     2.0    20.9|
16.800 |          |
+-----+
+-----+
| 135.00    135.00| Zero Out: Stream #1|     18.9     0.0|
|
| 133.00    135.00| Stream #3 Added to: Stream #4|     20.9    54.1|
16.650 |          |
| 135.00    135.00| Zero Out: Stream #3|     35.0     0.0|
|
| 136.00    137.00| Flow-Through Basin: Stream #5|    256.4    127.6|
16.533 |      4.99|
| 136.00    136.00| Flowby Basin Model: Stream #5|    127.6     2.0|
11.450 |          |
+-----+
+-----+
| 137.00    138.00| Flow-Through Basin: Stream #3|    125.6    82.7|
16.717 |      2.62|
| 137.00    137.10| Flowby Basin Model: Stream #3|     82.7    23.3|
16.717 |          |
| 138.00    139.00| Flow-Through Basin: Stream #1|     59.4    46.0|
17.300 |      2.59|
| 135.00    139.00| Stream #5 Added to: Stream #1|     46.0    48.0|
17.300 |          |

```

|	139.00	139.00	Zero Out:	Stream #5	2.0	0.0
+-----+						
|	139.00	139.00	Stream #3 Added to:	Stream #1	48.0	55.9
17.050	|	|	|	|		
|	139.00	139.00	Zero Out:	Stream #3	23.3	0.0
|	139.00	139.00	Stream #4 Added to:	Stream #1	55.9	95.8
16.700	|	|	|	|		
|	139.00	13305.00	Zero Out:	Stream #4	54.1	0.0
|	150.00	13305.00	Subarea (UH) Added to	Stream #3	0.0	33.6
16.433	|	4	|	|		
+-----+						
|	130.00	13305.00	Stream #3 Added to:	Stream #1	95.8	112.7
16.667	|	|	|	|		
|	13305.00	13305.00	Zero Out:	Stream #3	33.6	0.0
|	13305.00	13305.00	View:	Stream #1		112.7
16.667	|	53.95	3	|		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2016 Advanced Engineering Software (aes)
Ver. 23.0 Release Date: 07/01/2016 License ID 1264

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - COMPLEX UH *
* ULTIMATE CONDITION - LOCAL AREA A *
* 25-YR EV AUGUST 2019 ROKAMOTO *

FILE NAME: 3A25EVC.DAT
TIME/DATE OF STUDY: 09:58 08/26/2019

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 100.00 TO NODE 130.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 447.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.107
LOW LOSS FRACTION = 0.283
TIME OF CONCENTRATION (MIN.) = 21.22
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 10
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.34
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.72
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.95
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.59
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.20
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.68

FLOW PROCESS FROM NODE 130.00 TO NODE 131.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE PERMANENTLY STORED.

FLOW PROCESS FROM NODE 130.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-2 showing basin data.

3	2.00	2.01	6.100
4	3.00	2.02	8.000
5	4.00	43.00	10.000
6	5.00	45.00	11.900

FLOW PROCESS FROM NODE 130.00 TO NODE 133.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<<

MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	16.00
2	100.00	31.00
3	250.00	69.00
4	500.00	70.00
5	1000.00	75.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 4

FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	3.00	2.700
3	2.00	3.01	3.800
4	3.00	9.00	5.100
5	4.00	71.00	6.200
6	5.00	75.00	7.600

FLOW PROCESS FROM NODE 130.00 TO NODE 9.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	50.00
2	100.00	100.00
3	250.00	250.00
4	550.00	445.00
5	750.00	450.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 2

FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 7

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

FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 130.00 TO NODE 134.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	14.00
2	100.00	23.00
3	250.00	24.00
4	500.00	24.00
5	1200.00	25.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 134.00 TO NODE 135.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	2.00	3.100
3	2.00	2.01	4.300
4	3.00	7.00	5.500
5	4.00	25.00	6.900
6	5.00	30.00	8.300

=====

 FLOW PROCESS FROM NODE 132.00 TO NODE 135.00 IS CODE = 7

>>>>STREAM NUMBER 1 ADDED TO STREAM NUMBER 4<<<<<

=====

 FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

>>>>STREAM NUMBER 1 CLEARED AND SET TO ZERO<<<<<

=====

 FLOW PROCESS FROM NODE 133.00 TO NODE 135.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 4<<<<<

=====

 FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

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

=====

 FLOW PROCESS FROM NODE 136.00 TO NODE 137.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
 THROUGH A FLOW-THROUGH DETENTION BASIN.
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
 DEAD STORAGE (AF) = 0.000
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	83.00	4.300
3	2.00	380.00	8.900
4	3.00	400.00	13.300
5	4.00	478.00	18.000
6	5.00	600.00	23.100

=====

 FLOW PROCESS FROM NODE 136.00 TO NODE 136.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #5<<<<<

=====

MODEL STREAM NUMBER 5 FLOWING PAST A FLOWBY STRUCTURE:
 FLOWRATES IN STREAM # 5 WHICH ARE GREATER THAN Qpass IN
 THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	5.00	2.00
2	25.00	2.00
3	75.00	2.00
4	250.00	2.00
5	500.00	84.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

=====

 FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 3.2

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

=====

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	48.00	2.100
3	2.00	196.00	4.300
4	3.00	225.00	6.400
5	4.00	301.00	9.100
6	5.00	378.00	11.600

=====

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.10 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
      DATA PAIR      Qcenter      Qpass
      NUMBER          (CFS)        (CFS)
      -                0.00         0.00
      1                 5.00         2.00
      2                10.00         2.00
      3                50.00         3.00
      4                100.00        34.00
      5                325.00        127.00
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 1
=====
*****
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 3.2
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

      INTERVAL      DEPTH      OUTFLOW      STORAGE
      NUMBER        (FT)        (CFS)        (AF)
      1              0.00         0.00         0.000
      2              1.00         21.00        2.000
      3              2.00        114.00       4.200
      4              3.00        131.00       6.400
      5              4.00        176.00       8.800
      6              5.00        221.00      11.200
=====
*****
FLOW PROCESS FROM NODE 135.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====

```

```

=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 13305.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 150.00 TO NODE 13305.00 IS CODE = 1.2
-----
>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH) ADDED TO STREAM #3<<<<

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 62.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.702
LOW LOSS FRACTION = 0.550
TIME OF CONCENTRATION (MIN.) = 24.00
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 10
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.34
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.72
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.95
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.59
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.20
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.68

*****
FLOW PROCESS FROM NODE 130.00 TO NODE 13305.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
=====

```

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 11

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

```

+-----+
+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3A25EVC.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 |
+-----+
| 100.00    130.00| Subarea (UH) Added to Stream #1|      0.0    666.3|
16.367 | | 4 |
| 130.00    131.00| Flowby Basin Model: Stream #1|    666.3    651.3|
16.367 | | |
| 130.00    132.00| Flowby Basin Model: Stream #1|    651.3    70.9|
16.367 | | |
| 132.00    132.00| Flow-Through Basin: Stream #1|     70.9    43.1|
16.550 | 10.05| |
| 130.00    133.00| Flowby Basin Model: Stream #3|    580.4    70.8|
16.367 | | |
+-----+
| 133.00    133.00| Flow-Through Basin: Stream #3|     70.8    66.9|
16.600 | 6.13| |
| 130.00     9.00| Flowby Basin Model: Stream #4|    509.6    418.7|
16.367 | | |
| 9.00     9.00| Stream #2 Added to: Stream #3|     66.9    152.6|
16.367 | | |
| 9.00     9.00| Zero Out: Stream #2|     90.9     0.0|
| | |
| 130.00    134.00| Flowby Basin Model: Stream #4|    418.7    24.0|
16.150 | | |
+-----+
| 134.00    135.00| Flow-Through Basin: Stream #4|     24.0     8.3|
17.317 | 5.60| |
| 132.00    135.00| Stream #1 Added to: Stream #4|     8.3    49.6|
16.650 | | |
| 135.00    135.00| Zero Out: Stream #1|     43.1     0.0|
| | |
| 133.00    135.00| Stream #3 Added to: Stream #4|     49.6    196.8|
16.367 | | |
| 135.00    135.00| Zero Out: Stream #3|    152.6     0.0|
| | |
+-----+
| 136.00    137.00| Flow-Through Basin: Stream #5|    394.7    277.0|
16.483 | 7.31| |
| 136.00    136.00| Flowby Basin Model: Stream #5|    277.0    10.9|
16.483 | | |
| 137.00    138.00| Flow-Through Basin: Stream #3|    266.1    202.6|
16.667 | 4.78| |
| 137.00    137.10| Flowby Basin Model: Stream #3|    202.6    76.4|
16.667 | | |

```

|	138.00	139.00	Flow-Through Basin:	Stream #1	126.2	102.2
16.883	|	3.92	|	|	|	|
+-----+-----+-----+-----+						
|	135.00	139.00	Stream #5 Added to:	Stream #1	102.2	104.2
16.883	|	|	|	|	|	|
|	139.00	139.00	Zero Out:	Stream #5	10.9	0.0
|	139.00	139.00	Stream #3 Added to:	Stream #1	104.2	174.4
16.800	|	|	|	|	|	|
|	139.00	139.00	Zero Out:	Stream #3	76.4	0.0
|	139.00	139.00	Stream #4 Added to:	Stream #1	174.4	274.8
16.683	|	|	|	|	|	|
+-----+-----+-----+-----+						
|	139.00	13305.00	Zero Out:	Stream #4	196.8	0.0
|	150.00	13305.00	Subarea (UH) Added to	Stream #3	0.0	52.8
16.400	|	|	4	|	|	|
|	130.00	13305.00	Stream #3 Added to:	Stream #1	274.8	314.6
16.450	|	|	|	|	|	|
|	13305.00	13305.00	Zero Out:	Stream #3	52.8	0.0
|	13305.00	13305.00	View:	Stream #1		314.6
16.450	|	94.68	3	|	|	|

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

END OF FLOODSCx ROUTING ANALYSIS

FLOOD ROUTING ANALYSIS
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
(c) Copyright 1989-2016 Advanced Engineering Software (aes)
Ver. 23.0 Release Date: 07/01/2016 License ID 1264

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RANCHO MISSION VIEJO - COMPLEX UH *
* ULTIMATE CONDITION - LOCAL AREA A *
* 50-YR EV AUGUST 2019 ROKAMOTO *

FILE NAME: 3A50EVC.DAT
TIME/DATE OF STUDY: 09:47 08/26/2019

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 100.00 TO NODE 130.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 447.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.107
LOW LOSS FRACTION = 0.266
TIME OF CONCENTRATION (MIN.) = 20.89
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 50
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.37
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.80
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.06
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.78
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.47
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.12

FLOW PROCESS FROM NODE 130.00 TO NODE 131.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE PERMANENTLY STORED.

FLOW PROCESS FROM NODE 130.00 TO NODE 132.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #1<<<<

MODEL STREAM NUMBER 1 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 1 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

FLOW PROCESS FROM NODE 132.00 TO NODE 132.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-2 showing basin data.

3	2.00	2.01	6.100
4	3.00	2.02	8.000
5	4.00	43.00	10.000
6	5.00	45.00	11.900

FLOW PROCESS FROM NODE 130.00 TO NODE 133.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<<

MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	16.00
2	100.00	31.00
3	250.00	69.00
4	500.00	70.00
5	1000.00	75.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 4

FLOW PROCESS FROM NODE 133.00 TO NODE 133.00 IS CODE = 3.2

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

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	3.00	2.700
3	2.00	3.01	3.800
4	3.00	9.00	5.100
5	4.00	71.00	6.200
6	5.00	75.00	7.600

FLOW PROCESS FROM NODE 130.00 TO NODE 9.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	50.00
2	100.00	100.00
3	250.00	250.00
4	550.00	445.00
5	750.00	450.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 2

FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 7

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

FLOW PROCESS FROM NODE 9.00 TO NODE 9.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 130.00 TO NODE 134.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #4<<<<<

MODEL STREAM NUMBER 4 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 4 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	50.00	14.00
2	100.00	23.00
3	250.00	24.00
4	500.00	24.00
5	1200.00	25.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 134.00 TO NODE 135.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 4
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	2.00	3.100
3	2.00	2.01	4.300
4	3.00	7.00	5.500
5	4.00	25.00	6.900
6	5.00	30.00	8.300

=====

FLOW PROCESS FROM NODE 132.00 TO NODE 135.00 IS CODE = 7

>>>>STREAM NUMBER 1 ADDED TO STREAM NUMBER 4<<<<<

=====

FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

>>>>STREAM NUMBER 1 CLEARED AND SET TO ZERO<<<<<

=====

FLOW PROCESS FROM NODE 133.00 TO NODE 135.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 4<<<<<

=====

FLOW PROCESS FROM NODE 135.00 TO NODE 135.00 IS CODE = 6

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

=====

FLOW PROCESS FROM NODE 136.00 TO NODE 137.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	83.00	4.300
3	2.00	380.00	8.900
4	3.00	400.00	13.300
5	4.00	478.00	18.000
6	5.00	600.00	23.100

=====

FLOW PROCESS FROM NODE 136.00 TO NODE 136.00 IS CODE = 2

>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #5<<<<<

=====

MODEL STREAM NUMBER 5 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 5 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00
1	5.00	2.00
2	25.00	2.00
3	75.00	2.00
4	250.00	2.00
5	500.00	84.00

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 3

=====

FLOW PROCESS FROM NODE 137.00 TO NODE 138.00 IS CODE = 3.2

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

=====

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	48.00	2.100
3	2.00	196.00	4.300
4	3.00	225.00	6.400
5	4.00	301.00	9.100
6	5.00	378.00	11.600

=====

```

*****
FLOW PROCESS FROM NODE 137.00 TO NODE 137.10 IS CODE = 2
-----
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #3<<<<
=====
MODEL STREAM NUMBER 3 FLOWING PAST A FLOWBY STRUCTURE:
FLOWRATES IN STREAM # 3 WHICH ARE GREATER THAN Qpass IN
THE FOLLOWING RELATIONSHIPS ARE ASSUMED TO BE EXCESS FLOWS.
      DATA PAIR      Qcenter      Qpass
      NUMBER          (CFS)        (CFS)
      -                0.00         0.00
      1                 5.00         2.00
      2                10.00         2.00
      3                50.00         3.00
      4               100.00        34.00
      5               325.00       127.00
FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 1
=====
*****
FLOW PROCESS FROM NODE 138.00 TO NODE 139.00 IS CODE = 3.2
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<
=====
ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

      INTERVAL      DEPTH      OUTFLOW      STORAGE
      NUMBER        (FT)        (CFS)        (AF)
      1             0.00         0.00         0.000
      2             1.00        21.00         2.000
      3             2.00       114.00        4.200
      4             3.00       131.00        6.400
      5             4.00       176.00        8.800
      6             5.00       221.00       11.200
=====
*****
FLOW PROCESS FROM NODE 135.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----
>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<
=====

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=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 6
-----
>>>>STREAM NUMBER 3 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 139.00 IS CODE = 7
-----
>>>>STREAM NUMBER 4 ADDED TO STREAM NUMBER 1<<<<
=====
*****
FLOW PROCESS FROM NODE 139.00 TO NODE 13305.00 IS CODE = 6
-----
>>>>STREAM NUMBER 4 CLEARED AND SET TO ZERO<<<<
=====
*****
FLOW PROCESS FROM NODE 150.00 TO NODE 13305.00 IS CODE = 1.2
-----
>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH) ADDED TO STREAM #3<<<<

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 62.60
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.702
LOW LOSS FRACTION = 0.514
TIME OF CONCENTRATION (MIN.) = 23.72
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 50
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.37
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.80
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.06
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.78
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.47
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.12

*****
FLOW PROCESS FROM NODE 130.00 TO NODE 13305.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<
=====

```

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 6

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

FLOW PROCESS FROM NODE 13305.00 TO NODE 13305.00 IS CODE = 11

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

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+-----+
+-----+
|                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3A50EVC.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 |
+-----+
| 100.00    130.00| Subarea (UH) Added to Stream #1|      0.0    749.0|
16.350 |          | 4 |                               |                               |
| 130.00    131.00| Flowby Basin Model: Stream #1|    749.0    734.0|
16.350 |          |   |                               |                               |
| 130.00    132.00| Flowby Basin Model: Stream #1|    734.0    78.5|
16.350 |          |   |                               |                               |
| 132.00    132.00| Flow-Through Basin: Stream #1|     78.5    43.3|
16.583 | 10.29|   |                               |                               |
| 130.00    133.00| Flowby Basin Model: Stream #3|    655.5    71.6|
16.350 |          |   |                               |                               |
+-----+
| 133.00    133.00| Flow-Through Basin: Stream #3|     71.6    67.9|
16.617 | 6.15|   |                               |                               |
| 130.00     9.00| Flowby Basin Model: Stream #4|    583.9    445.8|
16.350 |          |   |                               |                               |
| 9.00     9.00| Stream #2 Added to: Stream #3|     67.9    201.6|
16.350 |          |   |                               |                               |
| 9.00     9.00| Zero Out: Stream #2|    138.1     0.0| | |
|          |          |   |                               |                               |
| 130.00    134.00| Flowby Basin Model: Stream #4|    445.8    24.0|
16.117 |          |   |                               |                               |
+-----+
| 134.00    135.00| Flow-Through Basin: Stream #4|     24.0    13.1|
16.917 | 5.97|   |                               |                               |
| 132.00    135.00| Stream #1 Added to: Stream #4|     13.1    56.1|
16.867 |          |   |                               |                               |
| 135.00    135.00| Zero Out: Stream #1|     43.3     0.0| | |
|          |          |   |                               |                               |
| 133.00    135.00| Stream #3 Added to: Stream #4|     56.1    251.2|
16.350 |          |   |                               |                               |
| 135.00    135.00| Zero Out: Stream #3|    201.6     0.0|
|          |          |   |                               |                               |
+-----+
| 136.00    137.00| Flow-Through Basin: Stream #5|    421.8    318.7|
16.483 | 7.95|   |                               |                               |
| 136.00    136.00| Flowby Basin Model: Stream #5|    318.7    24.5|
16.483 |          |   |                               |                               |
| 137.00    138.00| Flow-Through Basin: Stream #3|    294.2    214.0|
16.700 | 5.60|   |                               |                               |
| 137.00    137.10| Flowby Basin Model: Stream #3|    214.0    81.1|
16.700 |          |   |                               |                               |

```

|	138.00	139.00	Flow-Through Basin:	Stream #1	132.9	114.4
16.950	|	4.25	|	|	|	|
+-----+						
|	135.00	139.00	Stream #5 Added to:	Stream #1	114.4	116.4
16.950	|	|	|	|	|	|
|	139.00	139.00	Zero Out:	Stream #5	24.5	0.0
|	139.00	139.00	Stream #3 Added to:	Stream #1	116.4	192.1
16.867	|	|	|	|	|	|
|	139.00	139.00	Zero Out:	Stream #3	81.1	0.0
|	139.00	139.00	Stream #4 Added to:	Stream #1	192.1	345.7
16.350	|	|	|	|	|	|
+-----+						
|	139.00	13305.00	Zero Out:	Stream #4	251.2	0.0
|	150.00	13305.00	Subarea (UH) Added to	Stream #3	0.0	63.5
16.400	|	|	4	|	|	|
|	130.00	13305.00	Stream #3 Added to:	Stream #1	345.7	402.8
16.350	|	|	|	|	|	|
|	13305.00	13305.00	Zero Out:	Stream #3	63.5	0.0
|	13305.00	13305.00	View:	Stream #1		402.8
16.350	|	109.03	3	|	|	|
+-----+						
+-----+						
+-----+						

|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED B *
* SMALL AREA HYDROGRAPH - COMPLEX MODEL *
* 100-YR EV SEPT 2022 ROKAMOTO *

FILE NAME: 3B00EVC.DAT
TIME/DATE OF STUDY: 07:46 09/18/2022

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 210.00 TO NODE 231.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 213.70
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.128
LOW LOSS FRACTION = 0.323
TIME OF CONCENTRATION (MIN.) = 19.26
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 25
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.40
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.87
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.15
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.94
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.71
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.49

FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2

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

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

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-10 showing basin data.

FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	1.84	0.260
3	2.00	3.22	1.160
4	3.00	4.16	2.520
5	4.00	4.94	3.990
6	5.00	5.60	5.550
7	6.00	7.17	7.200
8	7.00	14.13	8.950
9	8.00	18.54	10.800
10	9.00	21.90	12.740
11	10.00	24.73	14.780
12	11.00	37.17	16.920
13	12.00	57.63	19.160
14	13.00	83.32	21.500
15	14.00	112.96	23.940
16	15.00	133.28	26.480
17	16.00	144.34	29.150
18	17.00	154.45	31.950
19	18.00	163.94	34.870
20	19.00	172.92	37.940
21	20.00	181.39	41.140
22	21.00	189.45	44.500
23	22.00	197.22	48.010
24	23.00	466.70	51.740
25	24.00	951.81	53.820

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 7

>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 6

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 11

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

=====

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+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3B00EVC.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 |
+-----+
| 210.00 231.00| Subarea (UH) Added to Stream #2| 0.0 405.5|
16.333 | | 4 |
| 221.00 221.00| Flowby Basin Model: Stream #2| 405.5 38.3|
16.333 | | |
| 221.00 223.00| Flow-Through Basin: Stream #2| 38.3 18.3|
16.633 | 4.49| |
| 221.00 222.00| Flow-Through Basin: Stream #5| 367.2 70.1|
16.633 | 20.30| |
| 225.00 225.00| Stream #5 Added to: Stream #2| 18.3 88.4|
16.633 | | |
+-----+
| 225.00 225.00| Zero Out: Stream #5| 70.1 0.0|
|
| 225.00 225.00| View: Stream #2| 88.4|
16.633 | 50.19| 3 |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS
GREATER THAN 1 SQ MI
|
+-----+

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END OF FLOODSCx ROUTING ANALYSIS

F L O O D R O U T I N G A N A L Y S I S
USING COUNTY HYDROLOGY MANUAL OF ORANGE (1986)
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Ver. 20.0 Release Date: 06/01/2013 License ID 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED B *
* SMALL AREA HYDROGRAPH - COMPLEX MODEL *
* 100-YR HC SEPT 2022 ROKAMOTO *

FILE NAME: 3B00HCC.DAT
TIME/DATE OF STUDY: 10:25 09/30/2022

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

FLOW PROCESS FROM NODE 210.00 TO NODE 231.00 IS CODE = 1.2

>>>>SUBAREA RUNOFF (SMALL AREA UNIT-HYDROGRAPH ANALYSIS) <<<<<

(SMALL AREA UNIT-HYDROGRAPH ADDED TO STREAM #2)

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 213.70
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.110
LOW LOSS FRACTION = 0.162
TIME OF CONCENTRATION (MIN.) = 18.60
SMALL AREA PEAK Q COMPUTED USING PEAK FLOW RATE FORMULA
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 100
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.52
30-MINUTE POINT RAINFALL VALUE (INCHES) = 1.09
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.45
3-HOUR POINT RAINFALL VALUE (INCHES) = 2.43
6-HOUR POINT RAINFALL VALUE (INCHES) = 3.36
24-HOUR POINT RAINFALL VALUE (INCHES) = 5.63

TOTAL CATCHMENT RUNOFF VOLUME (ACRE-FEET) = 77.14

TOTAL CATCHMENT SOIL-LOSS VOLUME (ACRE-FEET) = 23.12

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

HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS (CFS)

(Notes: Time indicated is at END of Each Unit Intervals.
Peak 5-minute rainfall intensity is modeled as
a constant value for entire 5-minute period.)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	133.5	267.0	400.4	533.9
0.017	0.0009	0.62	Q	.	.	.	.
0.033	0.0034	1.86	Q	.	.	.	.
0.050	0.0077	3.09	Q	.	.	.	.
0.067	0.0136	4.33	Q	.	.	.	.
0.083	0.0213	5.57	Q	.	.	.	.
0.100	0.0307	6.80	Q	.	.	.	.
0.117	0.0417	8.04	Q	.	.	.	.
0.133	0.0545	9.28	Q	.	.	.	.
0.150	0.0690	10.51	Q	.	.	.	.
0.167	0.0852	11.75	Q	.	.	.	.
0.183	0.1031	12.99	Q	.	.	.	.
0.200	0.1224	14.00	VQ	.	.	.	.
0.217	0.1418	14.11	VQ	.	.	.	.
0.233	0.1612	14.11	VQ	.	.	.	.
0.250	0.1807	14.12	VQ	.	.	.	.
0.267	0.2001	14.12	VQ	.	.	.	.
0.283	0.2196	14.12	VQ	.	.	.	.
0.300	0.2390	14.13	VQ	.	.	.	.
0.317	0.2585	14.13	VQ	.	.	.	.
0.333	0.2780	14.14	VQ	.	.	.	.
0.350	0.2975	14.14	VQ	.	.	.	.
0.367	0.3170	14.15	VQ	.	.	.	.
0.383	0.3364	14.15	VQ	.	.	.	.
0.400	0.3559	14.15	VQ	.	.	.	.
0.417	0.3754	14.16	VQ	.	.	.	.
0.433	0.3950	14.16	VQ	.	.	.	.
0.450	0.4145	14.17	VQ	.	.	.	.
0.467	0.4340	14.17	VQ	.	.	.	.
0.483	0.4535	14.18	VQ	.	.	.	.
0.500	0.4730	14.18	VQ	.	.	.	.
0.517	0.4926	14.19	VQ	.	.	.	.
0.533	0.5122	14.20	VQ	.	.	.	.
0.550	0.5317	14.22	VQ	.	.	.	.
0.567	0.5513	14.23	VQ	.	.	.	.
0.583	0.5710	14.24	VQ	.	.	.	.
0.600	0.5906	14.25	VQ	.	.	.	.
0.617	0.6102	14.27	VQ	.	.	.	.
0.633	0.6299	14.28	VQ	.	.	.	.
0.650	0.6496	14.29	VQ	.	.	.	.
0.667	0.6693	14.31	VQ	.	.	.	.
0.683	0.6890	14.32	VQ	.	.	.	.
0.700	0.7088	14.33	VQ	.	.	.	.
0.717	0.7285	14.34	VQ	.	.	.	.
0.733	0.7483	14.36	VQ	.	.	.	.
0.750	0.7681	14.37	VQ	.	.	.	.

0.767	0.7879	14.38	VQ	.	.	.	.
0.783	0.8077	14.39	VQ	.	.	.	.
0.800	0.8276	14.41	VQ	.	.	.	.
0.817	0.8474	14.42	VQ	.	.	.	.
0.833	0.8673	14.43	VQ	.	.	.	.
0.850	0.8872	14.43	VQ	.	.	.	.
0.867	0.9071	14.44	VQ	.	.	.	.
0.883	0.9270	14.45	VQ	.	.	.	.
0.900	0.9469	14.45	VQ	.	.	.	.
0.917	0.9668	14.46	VQ	.	.	.	.
0.933	0.9867	14.47	VQ	.	.	.	.
0.950	1.0067	14.47	VQ	.	.	.	.
0.967	1.0266	14.48	VQ	.	.	.	.
0.983	1.0466	14.49	VQ	.	.	.	.
1.000	1.0665	14.49	VQ	.	.	.	.
1.017	1.0865	14.50	VQ	.	.	.	.
1.033	1.1065	14.51	VQ	.	.	.	.
1.050	1.1265	14.51	VQ	.	.	.	.
1.067	1.1465	14.52	VQ	.	.	.	.
1.083	1.1665	14.53	VQ	.	.	.	.
1.100	1.1865	14.53	VQ	.	.	.	.
1.117	1.2065	14.54	VQ	.	.	.	.
1.133	1.2266	14.55	VQ	.	.	.	.
1.150	1.2466	14.56	VQ	.	.	.	.
1.167	1.2667	14.58	VQ	.	.	.	.
1.183	1.2868	14.59	VQ	.	.	.	.
1.200	1.3069	14.60	VQ	.	.	.	.
1.217	1.3270	14.62	VQ	.	.	.	.
1.233	1.3472	14.63	VQ	.	.	.	.
1.250	1.3674	14.64	VQ	.	.	.	.
1.267	1.3875	14.66	VQ	.	.	.	.
1.283	1.4078	14.67	VQ	.	.	.	.
1.300	1.4280	14.69	VQ	.	.	.	.
1.317	1.4482	14.70	VQ	.	.	.	.
1.333	1.4685	14.71	VQ	.	.	.	.
1.350	1.4888	14.73	VQ	.	.	.	.
1.367	1.5091	14.74	VQ	.	.	.	.
1.383	1.5294	14.75	VQ	.	.	.	.
1.400	1.5497	14.77	VQ	.	.	.	.
1.417	1.5701	14.78	VQ	.	.	.	.
1.433	1.5905	14.79	VQ	.	.	.	.
1.450	1.6109	14.80	VQ	.	.	.	.
1.467	1.6313	14.81	VQ	.	.	.	.
1.483	1.6517	14.82	VQ	.	.	.	.
1.500	1.6721	14.82	VQ	.	.	.	.
1.517	1.6925	14.83	VQ	.	.	.	.
1.533	1.7130	14.84	VQ	.	.	.	.
1.550	1.7334	14.85	VQ	.	.	.	.
1.567	1.7539	14.85	VQ	.	.	.	.
1.583	1.7743	14.86	VQ	.	.	.	.
1.600	1.7948	14.87	VQ	.	.	.	.
1.617	1.8153	14.87	VQ	.	.	.	.
1.633	1.8358	14.88	VQ	.	.	.	.
1.650	1.8563	14.89	VQ	.	.	.	.
1.667	1.8768	14.89	VQ	.	.	.	.
1.683	1.8974	14.90	VQ	.	.	.	.
1.700	1.9179	14.91	VQ	.	.	.	.
1.717	1.9384	14.92	.Q	.	.	.	.

1.733	1.9590	14.92	.Q	.	.	.	.
1.750	1.9796	14.93	.Q	.	.	.	.
1.767	2.0001	14.95	.Q	.	.	.	.
1.783	2.0208	14.96	.Q	.	.	.	.
1.800	2.0414	14.97	.Q	.	.	.	.
1.817	2.0620	14.99	.Q	.	.	.	.
1.833	2.0827	15.00	.Q	.	.	.	.
1.850	2.1034	15.02	.Q	.	.	.	.
1.867	2.1241	15.03	.Q	.	.	.	.
1.883	2.1448	15.05	.Q	.	.	.	.
1.900	2.1656	15.06	.Q	.	.	.	.
1.917	2.1863	15.08	.Q	.	.	.	.
1.933	2.2071	15.09	.Q	.	.	.	.
1.950	2.2279	15.11	.Q	.	.	.	.
1.967	2.2487	15.12	.Q	.	.	.	.
1.983	2.2696	15.14	.Q	.	.	.	.
2.000	2.2905	15.15	.Q	.	.	.	.
2.017	2.3114	15.16	.Q	.	.	.	.
2.033	2.3323	15.18	.Q	.	.	.	.
2.050	2.3532	15.19	.Q	.	.	.	.
2.067	2.3741	15.21	.Q	.	.	.	.
2.083	2.3951	15.21	.Q	.	.	.	.
2.100	2.4161	15.22	.Q	.	.	.	.
2.117	2.4370	15.23	.Q	.	.	.	.
2.133	2.4580	15.24	.Q	.	.	.	.
2.150	2.4790	15.24	.Q	.	.	.	.
2.167	2.5000	15.25	.Q	.	.	.	.
2.183	2.5210	15.26	.Q	.	.	.	.
2.200	2.5421	15.27	.Q	.	.	.	.
2.217	2.5631	15.27	.Q	.	.	.	.
2.233	2.5841	15.28	.Q	.	.	.	.
2.250	2.6052	15.29	.Q	.	.	.	.
2.267	2.6263	15.30	.Q	.	.	.	.
2.283	2.6474	15.30	.Q	.	.	.	.
2.300	2.6684	15.31	.Q	.	.	.	.
2.317	2.6895	15.32	.Q	.	.	.	.
2.333	2.7107	15.33	.Q	.	.	.	.
2.350	2.7318	15.33	.Q	.	.	.	.
2.367	2.7529	15.34	.Q	.	.	.	.
2.383	2.7741	15.36	.Q	.	.	.	.
2.400	2.7952	15.37	.Q	.	.	.	.
2.417	2.8164	15.39	.Q	.	.	.	.
2.433	2.8377	15.40	.Q	.	.	.	.
2.450	2.8589	15.42	.Q	.	.	.	.
2.467	2.8802	15.44	.Q	.	.	.	.
2.483	2.9014	15.45	.Q	.	.	.	.
2.500	2.9227	15.47	.Q	.	.	.	.
2.517	2.9441	15.48	.Q	.	.	.	.
2.533	2.9654	15.50	.Q	.	.	.	.
2.550	2.9868	15.51	.Q	.	.	.	.
2.567	3.0082	15.53	.Q	.	.	.	.
2.583	3.0296	15.55	.Q	.	.	.	.
2.600	3.0510	15.56	.Q	.	.	.	.
2.617	3.0725	15.58	.Q	.	.	.	.
2.633	3.0940	15.59	.Q	.	.	.	.
2.650	3.1155	15.61	.Q	.	.	.	.
2.667	3.1370	15.62	.Q	.	.	.	.
2.683	3.1585	15.64	.Q	.	.	.	.

2.700	3.1801	15.65	.Q	.	.	.	.
2.717	3.2016	15.65	.Q	.	.	.	.
2.733	3.2232	15.66	.Q	.	.	.	.
2.750	3.2448	15.67	.Q	.	.	.	.
2.767	3.2664	15.68	.Q	.	.	.	.
2.783	3.2880	15.69	.Q	.	.	.	.
2.800	3.3096	15.69	.Q	.	.	.	.
2.817	3.3312	15.70	.Q	.	.	.	.
2.833	3.3529	15.71	.Q	.	.	.	.
2.850	3.3745	15.72	.Q	.	.	.	.
2.867	3.3962	15.73	.Q	.	.	.	.
2.883	3.4179	15.74	.Q	.	.	.	.
2.900	3.4396	15.74	.Q	.	.	.	.
2.917	3.4613	15.75	.Q	.	.	.	.
2.933	3.4830	15.76	.Q	.	.	.	.
2.950	3.5047	15.77	.Q	.	.	.	.
2.967	3.5264	15.78	.Q	.	.	.	.
2.983	3.5482	15.78	.Q	.	.	.	.
3.000	3.5699	15.80	.Q	.	.	.	.
3.017	3.5917	15.82	.Q	.	.	.	.
3.033	3.6135	15.83	.Q	.	.	.	.
3.050	3.6353	15.85	.Q	.	.	.	.
3.067	3.6572	15.87	.Q	.	.	.	.
3.083	3.6791	15.88	.Q	.	.	.	.
3.100	3.7010	15.90	.Q	.	.	.	.
3.117	3.7229	15.92	.Q	.	.	.	.
3.133	3.7448	15.93	.Q	.	.	.	.
3.150	3.7668	15.95	.Q	.	.	.	.
3.167	3.7888	15.97	.Q	.	.	.	.
3.183	3.8108	15.98	.Q	.	.	.	.
3.200	3.8329	16.00	.Q	.	.	.	.
3.217	3.8549	16.02	.Q	.	.	.	.
3.233	3.8770	16.04	.QV	.	.	.	.
3.250	3.8991	16.05	.QV	.	.	.	.
3.267	3.9213	16.07	.QV	.	.	.	.
3.283	3.9434	16.09	.QV	.	.	.	.
3.300	3.9656	16.10	.QV	.	.	.	.
3.317	3.9878	16.11	.QV	.	.	.	.
3.333	4.0100	16.12	.QV	.	.	.	.
3.350	4.0322	16.13	.QV	.	.	.	.
3.367	4.0544	16.14	.QV	.	.	.	.
3.383	4.0767	16.15	.QV	.	.	.	.
3.400	4.0989	16.16	.QV	.	.	.	.
3.417	4.1212	16.16	.QV	.	.	.	.
3.433	4.1435	16.17	.QV	.	.	.	.
3.450	4.1658	16.18	.QV	.	.	.	.
3.467	4.1881	16.19	.QV	.	.	.	.
3.483	4.2104	16.20	.QV	.	.	.	.
3.500	4.2327	16.21	.QV	.	.	.	.
3.517	4.2551	16.22	.QV	.	.	.	.
3.533	4.2774	16.23	.QV	.	.	.	.
3.550	4.2998	16.24	.QV	.	.	.	.
3.567	4.3221	16.24	.QV	.	.	.	.
3.583	4.3445	16.25	.QV	.	.	.	.
3.600	4.3669	16.26	.QV	.	.	.	.
3.617	4.3893	16.28	.QV	.	.	.	.
3.633	4.4118	16.29	.QV	.	.	.	.
3.650	4.4343	16.31	.QV	.	.	.	.

3.667	4.4568	16.33	.QV	.	.	.	.
3.683	4.4793	16.35	.QV	.	.	.	.
3.700	4.5018	16.37	.QV	.	.	.	.
3.717	4.5244	16.39	.QV	.	.	.	.
3.733	4.5470	16.40	.QV	.	.	.	.
3.750	4.5696	16.42	.QV	.	.	.	.
3.767	4.5922	16.44	.QV	.	.	.	.
3.783	4.6149	16.46	.QV	.	.	.	.
3.800	4.6376	16.48	.QV	.	.	.	.
3.817	4.6603	16.50	.QV	.	.	.	.
3.833	4.6831	16.51	.QV	.	.	.	.
3.850	4.7059	16.53	.QV	.	.	.	.
3.867	4.7286	16.55	.QV	.	.	.	.
3.883	4.7515	16.57	.QV	.	.	.	.
3.900	4.7743	16.59	.QV	.	.	.	.
3.917	4.7972	16.60	.QV	.	.	.	.
3.933	4.8201	16.62	.QV	.	.	.	.
3.950	4.8430	16.63	.QV	.	.	.	.
3.967	4.8659	16.63	.QV	.	.	.	.
3.983	4.8888	16.64	.QV	.	.	.	.
4.000	4.9118	16.65	.QV	.	.	.	.
4.017	4.9347	16.66	.QV	.	.	.	.
4.033	4.9577	16.67	.QV	.	.	.	.
4.050	4.9806	16.68	.QV	.	.	.	.
4.067	5.0036	16.69	.QV	.	.	.	.
4.083	5.0266	16.70	.QV	.	.	.	.
4.100	5.0497	16.71	.QV	.	.	.	.
4.117	5.0727	16.72	.QV	.	.	.	.
4.133	5.0957	16.73	.QV	.	.	.	.
4.150	5.1188	16.74	.QV	.	.	.	.
4.167	5.1419	16.75	.QV	.	.	.	.
4.183	5.1650	16.76	.QV	.	.	.	.
4.200	5.1881	16.77	.QV	.	.	.	.
4.217	5.2112	16.78	.QV	.	.	.	.
4.233	5.2343	16.79	.QV	.	.	.	.
4.250	5.2574	16.81	.QV	.	.	.	.
4.267	5.2806	16.83	.QV	.	.	.	.
4.283	5.3038	16.85	.QV	.	.	.	.
4.300	5.3271	16.87	.QV	.	.	.	.
4.317	5.3503	16.89	.QV	.	.	.	.
4.333	5.3736	16.91	.QV	.	.	.	.
4.350	5.3970	16.93	.QV	.	.	.	.
4.367	5.4203	16.95	.QV	.	.	.	.
4.383	5.4437	16.97	.QV	.	.	.	.
4.400	5.4671	16.99	.QV	.	.	.	.
4.417	5.4905	17.01	.QV	.	.	.	.
4.433	5.5140	17.03	.QV	.	.	.	.
4.450	5.5375	17.05	.QV	.	.	.	.
4.467	5.5610	17.07	.QV	.	.	.	.
4.483	5.5845	17.09	.QV	.	.	.	.
4.500	5.6081	17.11	.QV	.	.	.	.
4.517	5.6317	17.13	.QV	.	.	.	.
4.533	5.6553	17.15	.QV	.	.	.	.
4.550	5.6789	17.16	.QV	.	.	.	.
4.567	5.7026	17.17	.QV	.	.	.	.
4.583	5.7263	17.18	.QV	.	.	.	.
4.600	5.7499	17.19	.QV	.	.	.	.
4.617	5.7736	17.20	.QV	.	.	.	.

4.633	5.7973	17.21	.Q V	.	.	.	.
4.650	5.8211	17.22	.Q V	.	.	.	.
4.667	5.8448	17.24	.Q V	.	.	.	.
4.683	5.8686	17.25	.Q V	.	.	.	.
4.700	5.8923	17.26	.Q V	.	.	.	.
4.717	5.9161	17.27	.Q V	.	.	.	.
4.733	5.9399	17.28	.Q V	.	.	.	.
4.750	5.9637	17.29	.Q V	.	.	.	.
4.767	5.9876	17.30	.Q V	.	.	.	.
4.783	6.0114	17.31	.Q V	.	.	.	.
4.800	6.0352	17.32	.Q V	.	.	.	.
4.817	6.0591	17.33	.Q V	.	.	.	.
4.833	6.0830	17.34	.Q V	.	.	.	.
4.850	6.1069	17.35	.Q V	.	.	.	.
4.867	6.1308	17.37	.Q V	.	.	.	.
4.883	6.1548	17.39	.Q V	.	.	.	.
4.900	6.1788	17.42	.Q V	.	.	.	.
4.917	6.2028	17.44	.Q V	.	.	.	.
4.933	6.2268	17.46	.Q V	.	.	.	.
4.950	6.2509	17.48	.Q V	.	.	.	.
4.967	6.2750	17.50	.Q V	.	.	.	.
4.983	6.2992	17.52	.Q V	.	.	.	.
5.000	6.3233	17.55	.Q V	.	.	.	.
5.017	6.3475	17.57	.Q V	.	.	.	.
5.033	6.3718	17.59	.Q V	.	.	.	.
5.050	6.3960	17.61	.Q V	.	.	.	.
5.067	6.4203	17.63	.Q V	.	.	.	.
5.083	6.4446	17.65	.Q V	.	.	.	.
5.100	6.4690	17.68	.Q V	.	.	.	.
5.117	6.4934	17.70	.Q V	.	.	.	.
5.133	6.5178	17.72	.Q V	.	.	.	.
5.150	6.5422	17.74	.Q V	.	.	.	.
5.167	6.5667	17.76	.Q V	.	.	.	.
5.183	6.5911	17.77	.Q V	.	.	.	.
5.200	6.6156	17.78	.Q V	.	.	.	.
5.217	6.6401	17.79	.Q V	.	.	.	.
5.233	6.6647	17.80	.Q V	.	.	.	.
5.250	6.6892	17.82	.Q V	.	.	.	.
5.267	6.7138	17.83	.Q V	.	.	.	.
5.283	6.7383	17.84	.Q V	.	.	.	.
5.300	6.7629	17.85	.Q V	.	.	.	.
5.317	6.7875	17.86	.Q V	.	.	.	.
5.333	6.8121	17.87	.Q V	.	.	.	.
5.350	6.8368	17.88	.Q V	.	.	.	.
5.367	6.8614	17.90	.Q V	.	.	.	.
5.383	6.8861	17.91	.Q V	.	.	.	.
5.400	6.9108	17.92	.Q V	.	.	.	.
5.417	6.9355	17.93	.Q V	.	.	.	.
5.433	6.9602	17.94	.Q V	.	.	.	.
5.450	6.9849	17.95	.Q V	.	.	.	.
5.467	7.0096	17.96	.Q V	.	.	.	.
5.483	7.0344	17.99	.Q V	.	.	.	.
5.500	7.0592	18.01	.Q V	.	.	.	.
5.517	7.0841	18.03	.Q V	.	.	.	.
5.533	7.1089	18.06	.Q V	.	.	.	.
5.550	7.1338	18.08	.Q V	.	.	.	.
5.567	7.1588	18.11	.Q V	.	.	.	.
5.583	7.1837	18.13	.Q V	.	.	.	.

5.600	7.2087	18.15	.Q V	.	.	.	.
5.617	7.2338	18.18	.Q V	.	.	.	.
5.633	7.2589	18.20	.Q V	.	.	.	.
5.650	7.2840	18.22	.Q V	.	.	.	.
5.667	7.3091	18.25	.Q V	.	.	.	.
5.683	7.3343	18.27	.Q V	.	.	.	.
5.700	7.3595	18.30	.Q V	.	.	.	.
5.717	7.3847	18.32	.Q V	.	.	.	.
5.733	7.4100	18.34	.Q V	.	.	.	.
5.750	7.4353	18.37	.Q V	.	.	.	.
5.767	7.4606	18.39	.Q V	.	.	.	.
5.783	7.4859	18.41	.Q V	.	.	.	.
5.800	7.5113	18.42	.Q V	.	.	.	.
5.817	7.5367	18.44	.Q V	.	.	.	.
5.833	7.5621	18.45	.Q V	.	.	.	.
5.850	7.5876	18.46	.Q V	.	.	.	.
5.867	7.6130	18.47	.Q V	.	.	.	.
5.883	7.6385	18.49	.Q V	.	.	.	.
5.900	7.6639	18.50	.Q V	.	.	.	.
5.917	7.6894	18.51	.Q V	.	.	.	.
5.933	7.7150	18.52	.Q V	.	.	.	.
5.950	7.7405	18.54	.Q V	.	.	.	.
5.967	7.7660	18.55	.Q V	.	.	.	.
5.983	7.7916	18.56	.Q V	.	.	.	.
6.000	7.8172	18.57	.Q V	.	.	.	.
6.017	7.8428	18.59	.Q V	.	.	.	.
6.033	7.8684	18.60	.Q V	.	.	.	.
6.050	7.8941	18.61	.Q V	.	.	.	.
6.067	7.9197	18.62	.Q V	.	.	.	.
6.083	7.9454	18.64	.Q V	.	.	.	.
6.100	7.9711	18.66	.Q V	.	.	.	.
6.117	7.9968	18.68	.Q V	.	.	.	.
6.133	8.0226	18.71	.Q V	.	.	.	.
6.150	8.0484	18.74	.Q V	.	.	.	.
6.167	8.0742	18.76	.Q V	.	.	.	.
6.183	8.1001	18.79	.Q V	.	.	.	.
6.200	8.1260	18.82	.Q V	.	.	.	.
6.217	8.1520	18.84	.Q V	.	.	.	.
6.233	8.1780	18.87	.Q V	.	.	.	.
6.250	8.2040	18.90	.Q V	.	.	.	.
6.267	8.2301	18.92	.Q V	.	.	.	.
6.283	8.2562	18.95	.Q V	.	.	.	.
6.300	8.2823	18.97	.Q V	.	.	.	.
6.317	8.3085	19.00	.Q V	.	.	.	.
6.333	8.3347	19.03	.Q V	.	.	.	.
6.350	8.3609	19.05	.Q V	.	.	.	.
6.367	8.3872	19.08	.Q V	.	.	.	.
6.383	8.4135	19.11	.Q V	.	.	.	.
6.400	8.4399	19.13	.Q V	.	.	.	.
6.417	8.4662	19.14	.Q V	.	.	.	.
6.433	8.4926	19.16	.Q V	.	.	.	.
6.450	8.5190	19.17	.Q V	.	.	.	.
6.467	8.5455	19.19	.Q V	.	.	.	.
6.483	8.5719	19.20	.Q V	.	.	.	.
6.500	8.5984	19.21	.Q V	.	.	.	.
6.517	8.6249	19.23	.Q V	.	.	.	.
6.533	8.6514	19.24	.Q V	.	.	.	.
6.550	8.6779	19.25	.Q V	.	.	.	.

6.567	8.7044	19.27	.Q V	.	.	.	.
6.583	8.7310	19.28	.Q V	.	.	.	.
6.600	8.7576	19.30	.Q V	.	.	.	.
6.617	8.7842	19.31	.Q V	.	.	.	.
6.633	8.8108	19.32	.Q V	.	.	.	.
6.650	8.8374	19.34	.Q V	.	.	.	.
6.667	8.8641	19.35	.Q V	.	.	.	.
6.683	8.8907	19.37	.Q V	.	.	.	.
6.700	8.9174	19.38	.Q V	.	.	.	.
6.717	8.9442	19.40	.Q V	.	.	.	.
6.733	8.9709	19.43	.Q V	.	.	.	.
6.750	8.9977	19.46	.Q V	.	.	.	.
6.767	9.0246	19.49	.Q V	.	.	.	.
6.783	9.0515	19.52	.Q V	.	.	.	.
6.800	9.0784	19.55	.Q V	.	.	.	.
6.817	9.1053	19.58	.Q V	.	.	.	.
6.833	9.1323	19.61	.Q V	.	.	.	.
6.850	9.1594	19.63	.Q V	.	.	.	.
6.867	9.1865	19.66	.Q V	.	.	.	.
6.883	9.2136	19.69	.Q V	.	.	.	.
6.900	9.2408	19.72	.Q V	.	.	.	.
6.917	9.2680	19.75	.Q V	.	.	.	.
6.933	9.2952	19.78	.Q V	.	.	.	.
6.950	9.3225	19.81	.Q V	.	.	.	.
6.967	9.3498	19.84	.Q V	.	.	.	.
6.983	9.3772	19.87	.Q V	.	.	.	.
7.000	9.4046	19.90	.Q V	.	.	.	.
7.017	9.4320	19.92	.Q V	.	.	.	.
7.033	9.4595	19.94	.Q V	.	.	.	.
7.050	9.4870	19.96	.Q V	.	.	.	.
7.067	9.5145	19.97	.Q V	.	.	.	.
7.083	9.5420	19.99	.Q V	.	.	.	.
7.100	9.5696	20.00	.Q V	.	.	.	.
7.117	9.5972	20.02	.Q V	.	.	.	.
7.133	9.6248	20.03	.Q V	.	.	.	.
7.150	9.6524	20.05	.Q V	.	.	.	.
7.167	9.6800	20.07	.Q V	.	.	.	.
7.183	9.7077	20.08	.Q V	.	.	.	.
7.200	9.7354	20.10	.Q V	.	.	.	.
7.217	9.7631	20.11	.Q V	.	.	.	.
7.233	9.7908	20.13	.Q V	.	.	.	.
7.250	9.8185	20.14	.Q V	.	.	.	.
7.267	9.8463	20.16	.Q V	.	.	.	.
7.283	9.8741	20.17	.Q V	.	.	.	.
7.300	9.9019	20.19	.Q V	.	.	.	.
7.317	9.9297	20.20	.Q V	.	.	.	.
7.333	9.9576	20.22	.Q V	.	.	.	.
7.350	9.9855	20.26	.Q V	.	.	.	.
7.367	10.0134	20.29	.Q V	.	.	.	.
7.383	10.0414	20.32	.Q V	.	.	.	.
7.400	10.0695	20.35	.Q V	.	.	.	.
7.417	10.0975	20.39	.Q V	.	.	.	.
7.433	10.1257	20.42	.Q V	.	.	.	.
7.450	10.1538	20.45	.Q V	.	.	.	.
7.467	10.1821	20.49	.Q V	.	.	.	.
7.483	10.2103	20.52	.Q V	.	.	.	.
7.500	10.2386	20.55	.Q V	.	.	.	.
7.517	10.2670	20.58	.Q V	.	.	.	.

7.533	10.2954	20.62	.Q	V	.	.	.	.
7.550	10.3238	20.65	.Q	V	.	.	.	.
7.567	10.3523	20.68	.Q	V	.	.	.	.
7.583	10.3808	20.71	.Q	V	.	.	.	.
7.600	10.4094	20.75	.Q	V	.	.	.	.
7.617	10.4380	20.78	.Q	V	.	.	.	.
7.633	10.4667	20.81	.Q	V	.	.	.	.
7.650	10.4954	20.83	.Q	V	.	.	.	.
7.667	10.5241	20.85	.Q	V	.	.	.	.
7.683	10.5529	20.87	.Q	V	.	.	.	.
7.700	10.5816	20.89	.Q	V	.	.	.	.
7.717	10.6104	20.90	.Q	V	.	.	.	.
7.733	10.6392	20.92	.Q	V	.	.	.	.
7.750	10.6681	20.94	.Q	V	.	.	.	.
7.767	10.6969	20.95	.Q	V	.	.	.	.
7.783	10.7258	20.97	.Q	V	.	.	.	.
7.800	10.7547	20.99	.Q	V	.	.	.	.
7.817	10.7837	21.01	.Q	V	.	.	.	.
7.833	10.8126	21.02	.Q	V	.	.	.	.
7.850	10.8416	21.04	.Q	V	.	.	.	.
7.867	10.8706	21.06	.Q	V	.	.	.	.
7.883	10.8996	21.07	.Q	V	.	.	.	.
7.900	10.9287	21.09	.Q	V	.	.	.	.
7.917	10.9578	21.11	.Q	V	.	.	.	.
7.933	10.9869	21.13	.Q	V	.	.	.	.
7.950	11.0160	21.15	.Q	V	.	.	.	.
7.967	11.0452	21.18	.Q	V	.	.	.	.
7.983	11.0744	21.22	.Q	V	.	.	.	.
8.000	11.1037	21.26	.Q	V	.	.	.	.
8.017	11.1330	21.29	.Q	V	.	.	.	.
8.033	11.1624	21.33	.Q	V	.	.	.	.
8.050	11.1918	21.37	.Q	V	.	.	.	.
8.067	11.2213	21.40	.Q	V	.	.	.	.
8.083	11.2508	21.44	.Q	V	.	.	.	.
8.100	11.2804	21.48	.Q	V	.	.	.	.
8.117	11.3100	21.51	.Q	V	.	.	.	.
8.133	11.3397	21.55	.Q	V	.	.	.	.
8.150	11.3695	21.59	.Q	V	.	.	.	.
8.167	11.3992	21.62	.Q	V	.	.	.	.
8.183	11.4291	21.66	.Q	V	.	.	.	.
8.200	11.4590	21.70	.Q	V	.	.	.	.
8.217	11.4889	21.73	.Q	V	.	.	.	.
8.233	11.5189	21.77	.Q	V	.	.	.	.
8.250	11.5489	21.81	.Q	V	.	.	.	.
8.267	11.5790	21.84	.Q	V	.	.	.	.
8.283	11.6091	21.85	.Q	V	.	.	.	.
8.300	11.6392	21.87	.Q	V	.	.	.	.
8.317	11.6694	21.89	.Q	V	.	.	.	.
8.333	11.6996	21.91	.Q	V	.	.	.	.
8.350	11.7298	21.93	.Q	V	.	.	.	.
8.367	11.7600	21.95	.Q	V	.	.	.	.
8.383	11.7903	21.97	.Q	V	.	.	.	.
8.400	11.8206	21.99	.Q	V	.	.	.	.
8.417	11.8509	22.01	.Q	V	.	.	.	.
8.433	11.8812	22.03	.Q	V	.	.	.	.
8.450	11.9116	22.05	.Q	V	.	.	.	.
8.467	11.9420	22.07	.Q	V	.	.	.	.
8.483	11.9724	22.09	.Q	V	.	.	.	.

8.500	12.0029	22.11	.Q	V	.	.	.	.
8.517	12.0334	22.13	.Q	V	.	.	.	.
8.533	12.0639	22.15	.Q	V	.	.	.	.
8.550	12.0944	22.17	.Q	V	.	.	.	.
8.567	12.1250	22.19	.Q	V	.	.	.	.
8.583	12.1556	22.23	.Q	V	.	.	.	.
8.600	12.1863	22.27	.Q	V	.	.	.	.
8.617	12.2170	22.31	.Q	V	.	.	.	.
8.633	12.2478	22.35	.Q	V	.	.	.	.
8.650	12.2786	22.39	.Q	V	.	.	.	.
8.667	12.3095	22.44	.Q	V	.	.	.	.
8.683	12.3405	22.48	.Q	V	.	.	.	.
8.700	12.3715	22.52	.Q	V	.	.	.	.
8.717	12.4026	22.56	.Q	V	.	.	.	.
8.733	12.4337	22.60	.Q	V	.	.	.	.
8.750	12.4649	22.64	.Q	V	.	.	.	.
8.767	12.4961	22.69	.Q	V	.	.	.	.
8.783	12.5275	22.73	.Q	V	.	.	.	.
8.800	12.5588	22.77	.Q	V	.	.	.	.
8.817	12.5902	22.81	.Q	V	.	.	.	.
8.833	12.6217	22.85	.Q	V	.	.	.	.
8.850	12.6533	22.89	.Q	V	.	.	.	.
8.867	12.6848	22.94	.Q	V	.	.	.	.
8.883	12.7165	22.97	.Q	V	.	.	.	.
8.900	12.7482	22.99	.Q	V	.	.	.	.
8.917	12.7799	23.02	.Q	V	.	.	.	.
8.933	12.8116	23.04	.Q	V	.	.	.	.
8.950	12.8434	23.06	.Q	V	.	.	.	.
8.967	12.8752	23.08	.Q	V	.	.	.	.
8.983	12.9070	23.11	.Q	V	.	.	.	.
9.000	12.9388	23.13	.Q	V	.	.	.	.
9.017	12.9707	23.15	.Q	V	.	.	.	.
9.033	13.0027	23.17	.Q	V	.	.	.	.
9.050	13.0346	23.20	.Q	V	.	.	.	.
9.067	13.0666	23.22	.Q	V	.	.	.	.
9.083	13.0986	23.24	.Q	V	.	.	.	.
9.100	13.1306	23.26	.Q	V	.	.	.	.
9.117	13.1627	23.29	.Q	V	.	.	.	.
9.133	13.1948	23.31	.Q	V	.	.	.	.
9.150	13.2270	23.33	.Q	V	.	.	.	.
9.167	13.2591	23.35	.Q	V	.	.	.	.
9.183	13.2913	23.37	.Q	V	.	.	.	.
9.200	13.3236	23.41	.Q	V	.	.	.	.
9.217	13.3559	23.46	.Q	V	.	.	.	.
9.233	13.3883	23.51	.Q	V	.	.	.	.
9.250	13.4207	23.56	.Q	V	.	.	.	.
9.267	13.4532	23.61	.Q	V	.	.	.	.
9.283	13.4858	23.65	.Q	V	.	.	.	.
9.300	13.5185	23.70	.Q	V	.	.	.	.
9.317	13.5512	23.75	.Q	V	.	.	.	.
9.333	13.5840	23.80	.Q	V	.	.	.	.
9.350	13.6168	23.85	.Q	V	.	.	.	.
9.367	13.6497	23.90	.Q	V	.	.	.	.
9.383	13.6827	23.94	.Q	V	.	.	.	.
9.400	13.7157	23.99	.Q	V	.	.	.	.
9.417	13.7489	24.04	.Q	V	.	.	.	.
9.433	13.7820	24.09	.Q	V	.	.	.	.
9.450	13.8153	24.14	.Q	V	.	.	.	.

9.467	13.8486	24.18	.Q	V	.	.	.
9.483	13.8820	24.23	.Q	V	.	.	.
9.500	13.9154	24.28	.Q	V	.	.	.
9.517	13.9489	24.30	.Q	V	.	.	.
9.533	13.9824	24.33	.Q	V	.	.	.
9.550	14.0159	24.35	.Q	V	.	.	.
9.567	14.0495	24.38	.Q	V	.	.	.
9.583	14.0831	24.41	.Q	V	.	.	.
9.600	14.1168	24.43	.Q	V	.	.	.
9.617	14.1505	24.46	.Q	V	.	.	.
9.633	14.1842	24.48	.Q	V	.	.	.
9.650	14.2180	24.51	.Q	V	.	.	.
9.667	14.2518	24.54	.Q	V	.	.	.
9.683	14.2856	24.56	.Q	V	.	.	.
9.700	14.3195	24.59	.Q	V	.	.	.
9.717	14.3534	24.61	.Q	V	.	.	.
9.733	14.3873	24.64	.Q	V	.	.	.
9.750	14.4213	24.66	.Q	V	.	.	.
9.767	14.4553	24.69	.Q	V	.	.	.
9.783	14.4893	24.72	.Q	V	.	.	.
9.800	14.5234	24.74	.Q	V	.	.	.
9.817	14.5575	24.78	.Q	V	.	.	.
9.833	14.5918	24.84	.Q	V	.	.	.
9.850	14.6260	24.90	.Q	V	.	.	.
9.867	14.6604	24.95	.Q	V	.	.	.
9.883	14.6949	25.01	.Q	V	.	.	.
9.900	14.7294	25.06	.Q	V	.	.	.
9.917	14.7640	25.12	.Q	V	.	.	.
9.933	14.7987	25.17	.Q	V	.	.	.
9.950	14.8334	25.23	.Q	V	.	.	.
9.967	14.8682	25.29	.Q	V	.	.	.
9.983	14.9031	25.34	.Q	V	.	.	.
10.000	14.9381	25.40	.Q	V	.	.	.
10.017	14.9732	25.45	.Q	V	.	.	.
10.033	15.0083	25.51	.Q	V	.	.	.
10.050	15.0435	25.57	.Q	V	.	.	.
10.067	15.0788	25.62	.Q	V	.	.	.
10.083	15.1142	25.68	.Q	V	.	.	.
10.100	15.1497	25.73	.Q	V	.	.	.
10.117	15.1852	25.79	.Q	V	.	.	.
10.133	15.2207	25.82	.Q	V	.	.	.
10.150	15.2564	25.85	.Q	V	.	.	.
10.167	15.2920	25.88	.Q	V	.	.	.
10.183	15.3277	25.91	.Q	V	.	.	.
10.200	15.3634	25.94	.Q	V	.	.	.
10.217	15.3992	25.98	.Q	V	.	.	.
10.233	15.4350	26.01	.Q	V	.	.	.
10.250	15.4709	26.04	.Q	V	.	.	.
10.267	15.5068	26.07	.Q	V	.	.	.
10.283	15.5428	26.10	.Q	V	.	.	.
10.300	15.5787	26.13	.Q	V	.	.	.
10.317	15.6148	26.16	.Q	V	.	.	.
10.333	15.6508	26.19	.Q	V	.	.	.
10.350	15.6870	26.22	.Q	V	.	.	.
10.367	15.7231	26.25	.Q	V	.	.	.
10.383	15.7593	26.28	.Q	V	.	.	.
10.400	15.7955	26.31	.Q	V	.	.	.
10.417	15.8318	26.34	.Q	V	.	.	.

10.433	15.8682	26.38	.Q	V	.	.	.
10.450	15.9046	26.45	.Q	V	.	.	.
10.467	15.9411	26.51	.Q	V	.	.	.
10.483	15.9777	26.58	.Q	V	.	.	.
10.500	16.0144	26.65	.Q	V	.	.	.
10.517	16.0512	26.71	.Q	V	.	.	.
10.533	16.0881	26.78	.Q	V	.	.	.
10.550	16.1251	26.84	.Q	V	.	.	.
10.567	16.1621	26.91	.Q	V	.	.	.
10.583	16.1993	26.98	.Q	V	.	.	.
10.600	16.2365	27.04	.Q	V	.	.	.
10.617	16.2739	27.11	.Q	V	.	.	.
10.633	16.3113	27.18	.Q	V	.	.	.
10.650	16.3488	27.24	.Q	V	.	.	.
10.667	16.3865	27.31	.Q	V	.	.	.
10.683	16.4242	27.37	.Q	V	.	.	.
10.700	16.4620	27.44	.Q	V	.	.	.
10.717	16.4998	27.51	.Q	V	.	.	.
10.733	16.5378	27.57	.Q	V	.	.	.
10.750	16.5759	27.62	.Q	V	.	.	.
10.767	16.6140	27.65	.Q	V	.	.	.
10.783	16.6521	27.69	.Q	V	.	.	.
10.800	16.6903	27.73	.Q	V	.	.	.
10.817	16.7285	27.76	.Q	V	.	.	.
10.833	16.7668	27.80	.Q	V	.	.	.
10.850	16.8052	27.84	.Q	V	.	.	.
10.867	16.8435	27.87	.Q	V	.	.	.
10.883	16.8820	27.91	.Q	V	.	.	.
10.900	16.9205	27.94	.Q	V	.	.	.
10.917	16.9590	27.98	.Q	V	.	.	.
10.933	16.9976	28.02	.Q	V	.	.	.
10.950	17.0363	28.05	.Q	V	.	.	.
10.967	17.0749	28.09	.Q	V	.	.	.
10.983	17.1137	28.13	.Q	V	.	.	.
11.000	17.1525	28.16	.Q	V	.	.	.
11.017	17.1913	28.20	.Q	V	.	.	.
11.033	17.2302	28.23	.Q	V	.	.	.
11.050	17.2692	28.28	.Q	V	.	.	.
11.067	17.3082	28.36	.Q	V	.	.	.
11.083	17.3474	28.44	.Q	V	.	.	.
11.100	17.3867	28.52	.Q	V	.	.	.
11.117	17.4260	28.60	.Q	V	.	.	.
11.133	17.4655	28.67	.Q	V	.	.	.
11.150	17.5051	28.75	.Q	V	.	.	.
11.167	17.5449	28.83	.Q	V	.	.	.
11.183	17.5847	28.91	.Q	V	.	.	.
11.200	17.6246	28.99	.Q	V	.	.	.
11.217	17.6647	29.07	.Q	V	.	.	.
11.233	17.7048	29.15	.Q	V	.	.	.
11.250	17.7451	29.23	.Q	V	.	.	.
11.267	17.7855	29.31	.Q	V	.	.	.
11.283	17.8260	29.39	.Q	V	.	.	.
11.300	17.8666	29.47	.Q	V	.	.	.
11.317	17.9073	29.55	.Q	V	.	.	.
11.333	17.9481	29.63	.Q	V	.	.	.
11.350	17.9890	29.71	.Q	V	.	.	.
11.367	18.0300	29.78	.Q	V	.	.	.
11.383	18.0711	29.82	.Q	V	.	.	.

11.400	18.1123	29.87	. Q	V.	.	.	.
11.417	18.1535	29.91	. Q	V.	.	.	.
11.433	18.1947	29.95	. Q	V.	.	.	.
11.450	18.2360	30.00	. Q	V.	.	.	.
11.467	18.2774	30.04	. Q	V.	.	.	.
11.483	18.3188	30.09	. Q	V.	.	.	.
11.500	18.3604	30.13	. Q	V.	.	.	.
11.517	18.4019	30.18	. Q	V.	.	.	.
11.533	18.4435	30.22	. Q	V.	.	.	.
11.550	18.4852	30.26	. Q	V.	.	.	.
11.567	18.5270	30.31	. Q	V.	.	.	.
11.583	18.5688	30.35	. Q	V.	.	.	.
11.600	18.6106	30.40	. Q	V.	.	.	.
11.617	18.6526	30.44	. Q	V.	.	.	.
11.633	18.6946	30.49	. Q	V.	.	.	.
11.650	18.7366	30.53	. Q	V.	.	.	.
11.667	18.7787	30.58	. Q	V.	.	.	.
11.683	18.8210	30.67	. Q	V.	.	.	.
11.700	18.8634	30.77	. Q	V.	.	.	.
11.717	18.9059	30.87	. Q	V.	.	.	.
11.733	18.9485	30.96	. Q	V.	.	.	.
11.750	18.9913	31.06	. Q	V.	.	.	.
11.767	19.0342	31.16	. Q	V.	.	.	.
11.783	19.0773	31.26	. Q	V.	.	.	.
11.800	19.1205	31.36	. Q	V.	.	.	.
11.817	19.1638	31.46	. Q	V.	.	.	.
11.833	19.2073	31.56	. Q	V.	.	.	.
11.850	19.2509	31.66	. Q	V.	.	.	.
11.867	19.2946	31.76	. Q	V	.	.	.
11.883	19.3385	31.85	. Q	V	.	.	.
11.900	19.3825	31.95	. Q	V	.	.	.
11.917	19.4267	32.05	. Q	V	.	.	.
11.933	19.4709	32.15	. Q	V	.	.	.
11.950	19.5154	32.25	. Q	V	.	.	.
11.967	19.5599	32.35	. Q	V	.	.	.
11.983	19.6047	32.49	. Q	V	.	.	.
12.000	19.6497	32.70	. Q	V	.	.	.
12.017	19.6951	32.92	. Q	V	.	.	.
12.033	19.7407	33.14	. Q	V	.	.	.
12.050	19.7867	33.36	. Q	V	.	.	.
12.067	19.8329	33.58	. Q	V	.	.	.
12.083	19.8795	33.80	. Q	V	.	.	.
12.100	19.9264	34.02	. Q	V	.	.	.
12.117	19.9735	34.24	. Q	V	.	.	.
12.133	20.0210	34.46	. Q	V	.	.	.
12.150	20.0688	34.68	. Q	V	.	.	.
12.167	20.1168	34.90	. Q	V	.	.	.
12.183	20.1652	35.12	. Q	V	.	.	.
12.200	20.2139	35.34	. Q	V	.	.	.
12.217	20.2629	35.56	. Q	V	.	.	.
12.233	20.3122	35.78	. Q	V	.	.	.
12.250	20.3617	36.00	. Q	V	.	.	.
12.267	20.4116	36.22	. Q	V	.	.	.
12.283	20.4618	36.44	. Q	V	.	.	.
12.300	20.5125	36.81	. Q	V	.	.	.
12.317	20.5638	37.24	. Q	V	.	.	.
12.333	20.6157	37.67	. Q	V	.	.	.
12.350	20.6682	38.10	. Q	V	.	.	.

12.367	20.7213	38.53	. Q	V	.	.	.
12.383	20.7749	38.96	. Q	V	.	.	.
12.400	20.8292	39.39	. Q	V	.	.	.
12.417	20.8840	39.83	. Q	V	.	.	.
12.433	20.9395	40.26	. Q	V	.	.	.
12.450	20.9955	40.69	. Q	V	.	.	.
12.467	21.0522	41.12	. Q	V	.	.	.
12.483	21.1094	41.55	. Q	V	.	.	.
12.500	21.1672	41.98	. Q	V	.	.	.
12.517	21.2256	42.41	. Q	.V	.	.	.
12.533	21.2847	42.84	. Q	.V	.	.	.
12.550	21.3443	43.28	. Q	.V	.	.	.
12.567	21.4045	43.71	. Q	.V	.	.	.
12.583	21.4653	44.14	. Q	.V	.	.	.
12.600	21.5266	44.50	. Q	.V	.	.	.
12.617	21.5880	44.61	. Q	.V	.	.	.
12.633	21.6496	44.69	. Q	.V	.	.	.
12.650	21.7112	44.76	. Q	.V	.	.	.
12.667	21.7730	44.84	. Q	.V	.	.	.
12.683	21.8348	44.91	. Q	.V	.	.	.
12.700	21.8968	44.99	. Q	.V	.	.	.
12.717	21.9589	45.07	. Q	.V	.	.	.
12.733	22.0211	45.14	. Q	.V	.	.	.
12.750	22.0834	45.22	. Q	.V	.	.	.
12.767	22.1457	45.30	. Q	.V	.	.	.
12.783	22.2082	45.37	. Q	.V	.	.	.
12.800	22.2708	45.45	. Q	.V	.	.	.
12.817	22.3335	45.52	. Q	.V	.	.	.
12.833	22.3964	45.60	. Q	.V	.	.	.
12.850	22.4593	45.68	. Q	.V	.	.	.
12.867	22.5223	45.75	. Q	.V	.	.	.
12.883	22.5854	45.83	. Q	.V	.	.	.
12.900	22.6486	45.91	. Q	.V	.	.	.
12.917	22.7121	46.03	. Q	.V	.	.	.
12.933	22.7757	46.21	. Q	.V	.	.	.
12.950	22.8396	46.38	. Q	.V	.	.	.
12.967	22.9037	46.56	. Q	.V	.	.	.
12.983	22.9681	46.74	. Q	.V	.	.	.
13.000	23.0327	46.91	. Q	.V	.	.	.
13.017	23.0976	47.09	. Q	.V	.	.	.
13.033	23.1627	47.26	. Q	.V	.	.	.
13.050	23.2280	47.44	. Q	.V	.	.	.
13.067	23.2936	47.62	. Q	.V	.	.	.
13.083	23.3594	47.79	. Q	.V	.	.	.
13.100	23.4255	47.97	. Q	.V	.	.	.
13.117	23.4918	48.14	. Q	.V	.	.	.
13.133	23.5584	48.32	. Q	.V	.	.	.
13.150	23.6252	48.50	. Q	.V	.	.	.
13.167	23.6922	48.67	. Q	.V	.	.	.
13.183	23.7595	48.85	. Q	.V	.	.	.
13.200	23.8270	49.02	. Q	.V	.	.	.
13.217	23.8948	49.19	. Q	.V	.	.	.
13.233	23.9627	49.31	. Q	.V	.	.	.
13.250	24.0308	49.41	. Q	.V	.	.	.
13.267	24.0990	49.52	. Q	.V	.	.	.
13.283	24.1673	49.62	. Q	.V	.	.	.
13.300	24.2358	49.72	. Q	.V	.	.	.
13.317	24.3044	49.82	. Q	.V	.	.	.

13.333	24.3732	49.93	.	Q	.	V	.	.	.
13.350	24.4421	50.03	.	Q	.	V	.	.	.
13.367	24.5112	50.13	.	Q	.	V	.	.	.
13.383	24.5804	50.23	.	Q	.	V	.	.	.
13.400	24.6497	50.34	.	Q	.	V	.	.	.
13.417	24.7192	50.44	.	Q	.	V	.	.	.
13.433	24.7888	50.54	.	Q	.	V	.	.	.
13.450	24.8585	50.65	.	Q	.	V	.	.	.
13.467	24.9284	50.75	.	Q	.	V	.	.	.
13.483	24.9985	50.85	.	Q	.	V	.	.	.
13.500	25.0687	50.95	.	Q	.	V	.	.	.
13.517	25.1390	51.06	.	Q	.	V	.	.	.
13.533	25.2095	51.20	.	Q	.	V	.	.	.
13.550	25.2804	51.45	.	Q	.	V	.	.	.
13.567	25.3516	51.69	.	Q	.	V	.	.	.
13.583	25.4231	51.94	.	Q	.	V	.	.	.
13.600	25.4950	52.18	.	Q	.	V	.	.	.
13.617	25.5672	52.43	.	Q	.	V	.	.	.
13.633	25.6398	52.67	.	Q	.	V	.	.	.
13.650	25.7127	52.92	.	Q	.	V	.	.	.
13.667	25.7859	53.16	.	Q	.	V	.	.	.
13.683	25.8594	53.41	.	Q	.	V	.	.	.
13.700	25.9334	53.65	.	Q	.	V	.	.	.
13.717	26.0076	53.90	.	Q	.	V	.	.	.
13.733	26.0822	54.14	.	Q	.	V	.	.	.
13.750	26.1571	54.39	.	Q	.	V	.	.	.
13.767	26.2323	54.63	.	Q	.	V	.	.	.
13.783	26.3079	54.88	.	Q	.	V	.	.	.
13.800	26.3839	55.13	.	Q	.	V	.	.	.
13.817	26.4601	55.37	.	Q	.	V	.	.	.
13.833	26.5367	55.61	.	Q	.	V	.	.	.
13.850	26.6136	55.79	.	Q	.	V	.	.	.
13.867	26.6906	55.94	.	Q	.	V	.	.	.
13.883	26.7679	56.09	.	Q	.	V	.	.	.
13.900	26.8454	56.24	.	Q	.	V	.	.	.
13.917	26.9230	56.39	.	Q	.	V	.	.	.
13.933	27.0009	56.54	.	Q	.	V	.	.	.
13.950	27.0790	56.69	.	Q	.	V	.	.	.
13.967	27.1573	56.83	.	Q	.	V	.	.	.
13.983	27.2358	56.98	.	Q	.	V	.	.	.
14.000	27.3145	57.13	.	Q	.	V	.	.	.
14.017	27.3934	57.28	.	Q	.	V	.	.	.
14.033	27.4725	57.43	.	Q	.	V	.	.	.
14.050	27.5518	57.58	.	Q	.	V	.	.	.
14.067	27.6313	57.73	.	Q	.	V	.	.	.
14.083	27.7110	57.88	.	Q	.	V	.	.	.
14.100	27.7909	58.02	.	Q	.	V	.	.	.
14.117	27.8711	58.17	.	Q	.	V	.	.	.
14.133	27.9514	58.32	.	Q	.	V	.	.	.
14.150	28.0320	58.51	.	Q	.	V	.	.	.
14.167	28.1131	58.89	.	Q	.	V	.	.	.
14.183	28.1948	59.28	.	Q	.	V	.	.	.
14.200	28.2769	59.67	.	Q	.	V	.	.	.
14.217	28.3597	60.06	.	Q	.	V	.	.	.
14.233	28.4430	60.46	.	Q	.	V	.	.	.
14.250	28.5268	60.85	.	Q	.	V	.	.	.
14.267	28.6111	61.24	.	Q	.	V	.	.	.
14.283	28.6960	61.63	.	Q	.	V	.	.	.

14.300	28.7815	62.03	.	Q	.	V	.	.	.
14.317	28.8674	62.42	.	Q	.	V	.	.	.
14.333	28.9539	62.81	.	Q	.	V	.	.	.
14.350	29.0410	63.20	.	Q	.	V	.	.	.
14.367	29.1286	63.60	.	Q	.	V	.	.	.
14.383	29.2167	63.99	.	Q	.	V	.	.	.
14.400	29.3054	64.38	.	Q	.	V	.	.	.
14.417	29.3946	64.77	.	Q	.	V	.	.	.
14.433	29.4844	65.17	.	Q	.	V	.	.	.
14.450	29.5747	65.56	.	Q	.	V	.	.	.
14.467	29.6654	65.88	.	Q	.	V	.	.	.
14.483	29.7565	66.12	.	Q	.	V	.	.	.
14.500	29.8479	66.36	.	Q	.	V	.	.	.
14.517	29.9397	66.60	.	Q	.	V	.	.	.
14.533	30.0317	66.85	.	Q	.	V	.	.	.
14.550	30.1241	67.09	.	Q	.	V	.	.	.
14.567	30.2169	67.33	.	Q	.	V	.	.	.
14.583	30.3100	67.58	.	Q	.	V	.	.	.
14.600	30.4034	67.82	.	Q	.	V	.	.	.
14.617	30.4971	68.06	.	Q	.	V	.	.	.
14.633	30.5912	68.31	.	Q	.	V	.	.	.
14.650	30.6856	68.55	.	Q	.	V	.	.	.
14.667	30.7804	68.79	.	Q	.	V	.	.	.
14.683	30.8755	69.03	.	Q	.	V	.	.	.
14.700	30.9709	69.28	.	Q	.	V	.	.	.
14.717	31.0667	69.52	.	Q	.	V	.	.	.
14.733	31.1628	69.76	.	Q	.	V	.	.	.
14.750	31.2592	70.01	.	Q	.	V	.	.	.
14.767	31.3560	70.28	.	Q	.	V	.	.	.
14.783	31.4536	70.88	.	Q	.	V	.	.	.
14.800	31.5522	71.56	.	Q	.	V	.	.	.
14.817	31.6517	72.24	.	Q	.	V	.	.	.
14.833	31.7521	72.92	.	Q	.	V	.	.	.
14.850	31.8535	73.59	.	Q	.	V	.	.	.
14.867	31.9558	74.27	.	Q	.	V	.	.	.
14.883	32.0590	74.95	.	Q	.	V	.	.	.
14.900	32.1632	75.62	.	Q	.	V	.	.	.
14.917	32.2683	76.30	.	Q	.	V	.	.	.
14.933	32.3743	76.98	.	Q	.	V	.	.	.
14.950	32.4813	77.66	.	Q	.	V	.	.	.
14.967	32.5892	78.33	.	Q	.	V	.	.	.
14.983	32.6980	79.01	.	Q	.	V	.	.	.
15.000	32.8078	79.69	.	Q	.	V	.	.	.
15.017	32.9185	80.37	.	Q	.	V	.	.	.
15.033	33.0301	81.04	.	Q	.	V	.	.	.
15.050	33.1427	81.72	.	Q	.	V	.	.	.
15.067	33.2562	82.40	.	Q	.	V	.	.	.
15.083	33.3705	83.02	.	Q	.	V	.	.	.
15.100	33.4856	83.53	.	Q	.	V	.	.	.
15.117	33.6013	84.03	.	Q	.	V	.	.	.
15.133	33.7177	84.53	.	Q	.	V	.	.	.
15.150	33.8349	85.03	.	Q	.	V	.	.	.
15.167	33.9527	85.54	.	Q	.	V	.	.	.
15.183	34.0712	86.04	.	Q	.	V	.	.	.
15.200	34.1904	86.54	.	Q	.	V	.	.	.
15.217	34.3103	87.04	.	Q	.	V	.	.	.
15.233	34.4309	87.55	.	Q	.	V	.	.	.
15.250	34.5522	88.05	.	Q	.	V	.	.	.

15.267	34.6742	88.55	.	Q	.	V	.	.	.
15.283	34.7968	89.06	.	Q	.	V	.	.	.
15.300	34.9202	89.56	.	Q	.	V	.	.	.
15.317	35.0442	90.06	.	Q	.	V	.	.	.
15.333	35.1690	90.56	.	Q	.	V	.	.	.
15.350	35.2944	91.07	.	Q	.	V	.	.	.
15.367	35.4205	91.57	.	Q	.	V	.	.	.
15.383	35.5474	92.08	.	Q	.	V	.	.	.
15.400	35.6755	93.01	.	Q	.	V	.	.	.
15.417	35.8051	94.13	.	Q	.	V	.	.	.
15.433	35.9363	95.25	.	Q	.	V	.	.	.
15.450	36.0691	96.37	.	Q	.	V	.	.	.
15.467	36.2034	97.50	.	Q	.	V	.	.	.
15.483	36.3392	98.62	.	Q	.	V	.	.	.
15.500	36.4766	99.74	.	Q	.	V	.	.	.
15.517	36.6155	100.86	.	Q	.	V	.	.	.
15.533	36.7560	101.98	.	Q	.	V	.	.	.
15.550	36.8980	103.10	.	Q	.	V	.	.	.
15.567	37.0416	104.23	.	Q	.	V	.	.	.
15.583	37.1867	105.35	.	Q	.	V	.	.	.
15.600	37.3333	106.47	.	Q	.	V	.	.	.
15.617	37.4815	107.59	.	Q	.	V	.	.	.
15.633	37.6313	108.71	.	Q	.	V	.	.	.
15.650	37.7826	109.83	.	Q	.	V	.	.	.
15.667	37.9354	110.96	.	Q	.	V	.	.	.
15.683	38.0898	112.08	.	Q	.	V	.	.	.
15.700	38.2461	113.48	.	Q	.	V	.	.	.
15.717	38.4059	116.02	.	Q	.	V	.	.	.
15.733	38.5694	118.68	.	Q	.	V	.	.	.
15.750	38.7365	121.35	.	Q	.	V	.	.	.
15.767	38.9073	124.01	.	Q	.	V	.	.	.
15.783	39.0818	126.68	.	Q	.	V	.	.	.
15.800	39.2600	129.34	.	Q	.	V	.	.	.
15.817	39.4418	132.00	.	Q	.	V	.	.	.
15.833	39.6273	134.67	.	Q	.	V	.	.	.
15.850	39.8164	137.33	.	Q	.	V	.	.	.
15.867	40.0093	140.00	.	Q	.	V	.	.	.
15.883	40.2058	142.66	.	Q	.	V	.	.	.
15.900	40.4059	145.33	.	Q	.	V	.	.	.
15.917	40.6098	147.99	.	.Q	.	.V	.	.	.
15.933	40.8173	150.66	.	.Q	.	.V	.	.	.
15.950	41.0285	153.32	.	.Q	.	.V	.	.	.
15.967	41.2433	155.98	.	.Q	.	.V	.	.	.
15.983	41.4619	158.65	.	.Q	.	.V	.	.	.
16.000	41.6841	161.31	.	.Q	.	.V	.	.	.
16.017	41.9218	172.63	.	.Q	.	.V	.	.	.
16.033	42.1871	192.59	.	.Q	.	.V	.	.	.
16.050	42.4799	212.55	.	.Q	.	.V	.	.	.
16.067	42.8001	232.51	.	.Q	.	.V	.	.	.
16.083	43.1479	252.47	.	.Q	.	.V	.	.	.
16.100	43.5232	272.43	.	.Q	.	.V	.	.	.
16.117	43.9259	292.39	.	.Q	.	.V	.	.	.
16.133	44.3561	312.36	.	.Q	.	.V	.	.	.
16.150	44.8139	332.32	.	.Q	.	.V	.	.	.
16.167	45.2991	352.28	.	.Q	.	.V	.	.	.
16.183	45.8118	372.24	.	.Q	.	.V	.	.	.
16.200	46.3521	392.20	.	.Q	.	.V	.	.	.
16.217	46.9198	412.16	.	.Q	.	.V	.	.	.

16.233	47.5150	432.12	.	.	.	V	.	.Q	.
16.250	48.1377	452.08	.	.	.	V	.	.Q	.
16.267	48.7879	472.05	.	.	.	V	.	.Q	.
16.283	49.4656	492.01	.	.	.	V	.	.Q	.
16.300	50.1708	511.97	.	.	.	V	.	.Q	.
16.317	50.9062	533.93	.	.	.	V	.	.Q	.
16.333	51.6129	513.04	.	.	.	V	.	.Q	.
16.350	52.2876	489.84	.	.	.	V	.	.Q	.
16.367	52.9304	466.64	.	.	.	V	.	.Q	.
16.383	53.5412	443.44	.	.	.	V	.	.Q	.
16.400	54.1200	420.24	.	.	.	V	.	.Q	.
16.417	54.6669	397.04	.	.	.	V	.	.Q	.
16.433	55.1818	373.84	.	.	.	V	.	.Q	.
16.450	55.6648	350.64	.	.	.	V	.	.Q	.
16.467	56.1158	327.44	.	.	.	V	.	.Q	.
16.483	56.5349	304.24	.	.	.	V	.	.Q	.
16.500	56.9220	281.04	.	.	.	V	.	.Q	.
16.517	57.2771	257.84	.	.	.	V	.	.Q	.
16.533	57.6003	234.64	.	.	.	V	.	.Q	.
16.550	57.8916	211.44	.	.	.	V	.	.Q	.
16.567	58.1508	188.24	.	.	.	V	.	.Q	.
16.583	58.3782	165.03	.	.	.	V	.	.Q	.
16.600	58.5735	141.83	.	.	.	V	.	.Q	.
16.617	58.7369	118.63	.	.	.	V	.	.Q	.
16.633	58.8780	102.40	.	.	.	V	.	.Q	.
16.650	59.0165	100.54	.	.	.	V	.	.Q	.
16.667	59.1530	99.11	.	.	.	V	.	.Q	.
16.683	59.2875	97.68	.	.	.	V	.	.Q	.
16.700	59.4201	96.25	.	.	.	V	.	.Q	.
16.717	59.5507	94.82	.	.	.	V	.	.Q	.
16.733	59.6794	93.39	.	.	.	V	.	.Q	.
16.750	59.8060	91.97	.	.	.	V	.	.Q	.
16.767	59.9307	90.54	.	.	.	V	.	.Q	.
16.783	60.0535	89.11	.	.	.	V	.	.Q	.
16.800	60.1743	87.68	.	.	.	V	.	.Q	.
16.817	60.2931	86.25	.	.	.	V	.	.Q	.
16.833	60.4099	84.82	.	.	.	V	.	.Q	.
16.850	60.5248	83.40	.	.	.	V	.	.Q	.
16.867	60.6377	81.97	.	.	.	V	.	.Q	.
16.883	60.7486	80.54	.	.	.	V	.	.Q	.
16.900	60.8576	79.11	.	.	.	V	.	.Q	.
16.917	60.9646	77.68	.	.	.	V	.	.Q	.
16.933	61.0696	76.27	.	.	.	V	.	.Q	.
16.950	61.1733	75.30	.	.	.	V	.	.Q	.
16.967	61.2760	74.55	.	.	.	V	.	.Q	.
16.983	61.3777	73.80	.	.	.	V	.	.Q	.
17.000	61.4783	73.05	.	.	.	V	.	.Q	.
17.017	61.5779	72.30	.	.	.	V	.	.Q	.
17.033	61.6765	71.55	.	.	.	V	.	.Q	.
17.050	61.7740	70.80	.	.	.	V	.	.Q	.
17.067	61.8705	70.05	.	.	.	V	.	.Q	.
17.083	61.9659	69.30	.	.	.	V	.	.Q	.
17.100	62.0604	68.55	.	.	.	V	.	.Q	.
17.117	62.1537	67.80	.	.	.	V	.	.Q	.
17.133	62.2461	67.05	.	.	.	V	.	.Q	.
17.150	62.3374	66.30	.	.	.	V	.	.Q	.
17.167	62.4277	65.55	.	.	.	V	.	.Q	.
17.183	62.5170	64.80	.	.	.	V	.	.Q	.

17.200	62.6052	64.05	.	Q	.	.	.	V	.
17.217	62.6924	63.30	.	Q	.	.	.	V	.
17.233	62.7786	62.55	.	Q	.	.	.	V	.
17.250	62.8638	61.86	.	Q	.	.	.	V	.
17.267	62.9483	61.37	.	Q	.	.	.	V	.
17.283	63.0322	60.91	.	Q	.	.	.	V	.
17.300	63.1155	60.44	.	Q	.	.	.	V	.
17.317	63.1981	59.98	.	Q	.	.	.	V	.
17.333	63.2801	59.52	.	Q	.	.	.	V	.
17.350	63.3614	59.06	.	Q	.	.	.	V	.
17.367	63.4421	58.59	.	Q	.	.	.	V	.
17.383	63.5222	58.13	.	Q	.	.	.	V	.
17.400	63.6016	57.67	.	Q	.	.	.	V	.
17.417	63.6804	57.20	.	Q	.	.	.	V	.
17.433	63.7586	56.74	.	Q	.	.	.	V	.
17.450	63.8361	56.28	.	Q	.	.	.	V	.
17.467	63.9130	55.81	.	Q	.	.	.	V	.
17.483	63.9892	55.35	.	Q	.	.	.	V	.
17.500	64.0648	54.89	.	Q	.	.	.	V	.
17.517	64.1398	54.43	.	Q	.	.	.	V	.
17.533	64.2141	53.96	.	Q	.	.	.	V	.
17.550	64.2878	53.50	.	Q	.	.	.	V	.
17.567	64.3609	53.11	.	Q	.	.	.	V	.
17.583	64.4337	52.80	.	Q	.	.	.	V	.
17.600	64.5060	52.49	.	Q	.	.	.	V	.
17.617	64.5779	52.18	.	Q	.	.	.	V	.
17.633	64.6493	51.87	.	Q	.	.	.	V	.
17.650	64.7203	51.56	.	Q	.	.	.	V	.
17.667	64.7909	51.25	.	Q	.	.	.	V	.
17.683	64.8611	50.94	.	Q	.	.	.	V	.
17.700	64.9308	50.63	.	Q	.	.	.	V	.
17.717	65.0001	50.32	.	Q	.	.	.	V	.
17.733	65.0690	50.01	.	Q	.	.	.	V	.
17.750	65.1375	49.70	.	Q	.	.	.	V	.
17.767	65.2055	49.39	.	Q	.	.	.	V	.
17.783	65.2731	49.08	.	Q	.	.	.	V	.
17.800	65.3403	48.77	.	Q	.	.	.	V	.
17.817	65.4071	48.46	.	Q	.	.	.	V	.
17.833	65.4734	48.15	.	Q	.	.	.	V	.
17.850	65.5393	47.84	.	Q	.	.	.	V	.
17.867	65.6047	47.54	.	Q	.	.	.	V	.
17.883	65.6699	47.29	.	Q	.	.	.	V	.
17.900	65.7347	47.06	.	Q	.	.	.	V	.
17.917	65.7992	46.83	.	Q	.	.	.	V	.
17.933	65.8634	46.60	.	Q	.	.	.	V	.
17.950	65.9273	46.37	.	Q	.	.	.	V	.
17.967	65.9908	46.14	.	Q	.	.	.	V	.
17.983	66.0541	45.91	.	Q	.	.	.	V	.
18.000	66.1170	45.69	.	Q	.	.	.	V	.
18.017	66.1796	45.46	.	Q	.	.	.	V	.
18.033	66.2419	45.23	.	Q	.	.	.	V	.
18.050	66.3039	45.00	.	Q	.	.	.	V	.
18.067	66.3656	44.77	.	Q	.	.	.	V	.
18.083	66.4269	44.54	.	Q	.	.	.	V	.
18.100	66.4879	44.31	.	Q	.	.	.	V	.
18.117	66.5487	44.08	.	Q	.	.	.	V	.
18.133	66.6090	43.85	.	Q	.	.	.	V	.
18.150	66.6691	43.62	.	Q	.	.	.	V	.

18.167	66.7289	43.39	.	Q	.	.	.	V	.
18.183	66.7882	43.03	.	Q	.	.	.	V	.
18.200	66.8466	42.41	.	Q	.	.	.	V	.
18.217	66.9041	41.77	.	Q	.	.	.	V	.
18.233	66.9608	41.14	.	Q	.	.	.	V	.
18.250	67.0166	40.51	.	Q	.	.	.	V	.
18.267	67.0715	39.88	.	Q	.	.	.	V	.
18.283	67.1255	39.24	.	Q	.	.	.	V	.
18.300	67.1787	38.61	.	Q	.	.	.	V	.
18.317	67.2310	37.98	.	Q	.	.	.	V	.
18.333	67.2825	37.35	.	Q	.	.	.	V	.
18.350	67.3330	36.71	.	Q	.	.	.	V	.
18.367	67.3827	36.08	.	Q	.	.	.	V	.
18.383	67.4316	35.45	.	Q	.	.	.	V	.
18.400	67.4795	34.82	.	Q	.	.	.	V	.
18.417	67.5266	34.18	.	Q	.	.	.	V	.
18.433	67.5728	33.55	.	Q	.	.	.	V	.
18.450	67.6182	32.92	.	Q	.	.	.	V	.
18.467	67.6626	32.29	.	Q	.	.	.	V	.
18.483	67.7062	31.66	.	Q	.	.	.	V	.
18.500	67.7495	31.37	.	Q	.	.	.	V	.
18.517	67.7925	31.24	.	Q	.	.	.	V	.
18.533	67.8353	31.10	.	Q	.	.	.	V	.
18.550	67.8780	30.97	.	Q	.	.	.	V	.
18.567	67.9204	30.84	.	Q	.	.	.	V	.
18.583	67.9627	30.70	.	Q	.	.	.	V	.
18.600	68.0048	30.57	.	Q	.	.	.	V	.
18.617	68.0468	30.44	.	Q	.	.	.	V	.
18.633	68.0885	30.30	.	Q	.	.	.	V	.
18.650	68.1301	30.17	.	Q	.	.	.	V	.
18.667	68.1714	30.04	.	Q	.	.	.	V	.
18.683	68.2126	29.90	.	Q	.	.	.	V	.
18.700	68.2536	29.77	.	Q	.	.	.	V	.
18.717	68.2945	29.64	.	Q	.	.	.	V	.
18.733	68.3351	29.50	.	Q	.	.	.	V	.
18.750	68.3756	29.37	.	Q	.	.	.	V	.
18.767	68.4158	29.24	.	Q	.	.	.	V	.
18.783	68.4559	29.11	.	Q	.	.	.	V	.
18.800	68.4958	28.98	.	Q	.	.	.	V	.
18.817	68.5356	28.87	.	Q	.	.	.	V	.
18.833	68.5752	28.76	.	Q	.	.	.	V	.
18.850	68.6147	28.65	.	Q	.	.	.	V	.
18.867	68.6540	28.54	.	Q	.	.	.	V	.
18.883	68.6931	28.43	.	Q	.	.	.	V	.
18.900	68.7321	28.32	.	Q	.	.	.	V	.
18.917	68.7710	28.21	.	Q	.	.	.	V	.
18.933	68.8097	28.10	.	Q	.	.	.	V	.
18.950	68.8483	27.99	.	Q	.	.	.	V	.
18.967	68.8867	27.88	.	Q	.	.	.	V	.
18.983	68.9249	27.78	.	Q	.	.	.	V	.
19.000	68.9630	27.67	.	Q	.	.	.	V	.
19.017	69.0010	27.56	.	Q	.	.	.	V	.
19.033	69.0388	27.45	.	Q	.	.	.	V	.
19.050	69.0765	27.34	.	Q	.	.	.	V	.
19.067	69.1140	27.23	.	Q	.	.	.	V	.
19.083	69.1513	27.12	.	Q	.	.	.	V	.
19.100	69.1885	27.01	.	Q	.	.	.	V	.
19.117	69.2256	26.91	.	Q	.	.	.	V	.

19.133	69.2626	26.82	.Q	.	.	.	V	.
19.150	69.2994	26.73	.Q	.	.	.	V	.
19.167	69.3361	26.64	.Q	.	.	.	V	.
19.183	69.3726	26.55	.Q	.	.	.	V	.
19.200	69.4091	26.46	.Q	.	.	.	V	.
19.217	69.4454	26.37	.Q	.	.	.	V	.
19.233	69.4816	26.27	.Q	.	.	.	V	.
19.250	69.5177	26.18	.Q	.	.	.	V	.
19.267	69.5536	26.09	.Q	.	.	.	V	.
19.283	69.5894	26.00	.Q	.	.	.	V	.
19.300	69.6251	25.91	.Q	.	.	.	V	.
19.317	69.6607	25.82	.Q	.	.	.	V	.
19.333	69.6961	25.73	.Q	.	.	.	V	.
19.350	69.7314	25.64	.Q	.	.	.	V	.
19.367	69.7666	25.54	.Q	.	.	.	V	.
19.383	69.8017	25.45	.Q	.	.	.	V	.
19.400	69.8366	25.36	.Q	.	.	.	V	.
19.417	69.8714	25.27	.Q	.	.	.	V	.
19.433	69.9061	25.19	.Q	.	.	.	V	.
19.450	69.9407	25.11	.Q	.	.	.	V	.
19.467	69.9752	25.04	.Q	.	.	.	V	.
19.483	70.0096	24.96	.Q	.	.	.	V	.
19.500	70.0438	24.88	.Q	.	.	.	V	.
19.517	70.0780	24.80	.Q	.	.	.	V	.
19.533	70.1120	24.73	.Q	.	.	.	V	.
19.550	70.1460	24.65	.Q	.	.	.	V	.
19.567	70.1798	24.57	.Q	.	.	.	V	.
19.583	70.2136	24.49	.Q	.	.	.	V	.
19.600	70.2472	24.42	.Q	.	.	.	V	.
19.617	70.2807	24.34	.Q	.	.	.	V	.
19.633	70.3141	24.26	.Q	.	.	.	V	.
19.650	70.3475	24.18	.Q	.	.	.	V	.
19.667	70.3807	24.10	.Q	.	.	.	V	.
19.683	70.4138	24.03	.Q	.	.	.	V	.
19.700	70.4467	23.95	.Q	.	.	.	V	.
19.717	70.4796	23.87	.Q	.	.	.	V	.
19.733	70.5124	23.80	.Q	.	.	.	V	.
19.750	70.5451	23.73	.Q	.	.	.	V	.
19.767	70.5777	23.66	.Q	.	.	.	V	.
19.783	70.6102	23.60	.Q	.	.	.	V	.
19.800	70.6426	23.53	.Q	.	.	.	V	.
19.817	70.6749	23.46	.Q	.	.	.	V	.
19.833	70.7071	23.39	.Q	.	.	.	V	.
19.850	70.7393	23.33	.Q	.	.	.	V	.
19.867	70.7713	23.26	.Q	.	.	.	V	.
19.883	70.8032	23.19	.Q	.	.	.	V	.
19.900	70.8351	23.13	.Q	.	.	.	V	.
19.917	70.8669	23.06	.Q	.	.	.	V	.
19.933	70.8985	22.99	.Q	.	.	.	V	.
19.950	70.9301	22.92	.Q	.	.	.	V	.
19.967	70.9616	22.86	.Q	.	.	.	V	.
19.983	70.9930	22.79	.Q	.	.	.	V	.
20.000	71.0243	22.72	.Q	.	.	.	V	.
20.017	71.0555	22.66	.Q	.	.	.	V	.
20.033	71.0866	22.59	.Q	.	.	.	V	.
20.050	71.1176	22.53	.Q	.	.	.	V	.
20.067	71.1486	22.47	.Q	.	.	.	V	.
20.083	71.1795	22.41	.Q	.	.	.	V	.

20.100	71.2102	22.35	.Q	.	.	.	V	.
20.117	71.2409	22.29	.Q	.	.	.	V	.
20.133	71.2716	22.23	.Q	.	.	.	V	.
20.150	71.3021	22.18	.Q	.	.	.	V	.
20.167	71.3326	22.12	.Q	.	.	.	V	.
20.183	71.3630	22.06	.Q	.	.	.	V	.
20.200	71.3933	22.00	.Q	.	.	.	V	.
20.217	71.4235	21.94	.Q	.	.	.	V	.
20.233	71.4536	21.88	.Q	.	.	.	V	.
20.250	71.4837	21.82	.Q	.	.	.	V	.
20.267	71.5137	21.76	.Q	.	.	.	V	.
20.283	71.5436	21.71	.Q	.	.	.	V	.
20.300	71.5734	21.65	.Q	.	.	.	V	.
20.317	71.6031	21.59	.Q	.	.	.	V	.
20.333	71.6328	21.53	.Q	.	.	.	V	.
20.350	71.6624	21.47	.Q	.	.	.	V	.
20.367	71.6919	21.42	.Q	.	.	.	V	.
20.383	71.7213	21.37	.Q	.	.	.	V	.
20.400	71.7506	21.32	.Q	.	.	.	V	.
20.417	71.7799	21.26	.Q	.	.	.	V	.
20.433	71.8092	21.21	.Q	.	.	.	V	.
20.450	71.8383	21.16	.Q	.	.	.	V	.
20.467	71.8674	21.11	.Q	.	.	.	V	.
20.483	71.8964	21.06	.Q	.	.	.	V	.
20.500	71.9253	21.01	.Q	.	.	.	V	.
20.517	71.9542	20.95	.Q	.	.	.	V	.
20.533	71.9830	20.90	.Q	.	.	.	V	.
20.550	72.0117	20.85	.Q	.	.	.	V	.
20.567	72.0403	20.80	.Q	.	.	.	V	.
20.583	72.0689	20.75	.Q	.	.	.	V	.
20.600	72.0974	20.69	.Q	.	.	.	V	.
20.617	72.1258	20.64	.Q	.	.	.	V	.
20.633	72.1542	20.59	.Q	.	.	.	V	.
20.650	72.1825	20.54	.Q	.	.	.	V	.
20.667	72.2107	20.49	.Q	.	.	.	V	.
20.683	72.2389	20.44	.Q	.	.	.	V	.
20.700	72.2670	20.40	.Q	.	.	.	V	.
20.717	72.2950	20.35	.Q	.	.	.	V	.
20.733	72.3230	20.30	.Q	.	.	.	V	.
20.750	72.3509	20.26	.Q	.	.	.	V	.
20.767	72.3787	20.21	.Q	.	.	.	V	.
20.783	72.4065	20.17	.Q	.	.	.	V	.
20.800	72.4342	20.12	.Q	.	.	.	V	.
20.817	72.4618	20.07	.Q	.	.	.	V	.
20.833	72.4894	20.03	.Q	.	.	.	V	.
20.850	72.5170	19.98	.Q	.	.	.	V	.
20.867	72.5444	19.93	.Q	.	.	.	V	.
20.883	72.5718	19.89	.Q	.	.	.	V	.
20.900	72.5991	19.84	.Q	.	.	.	V	.
20.917	72.6264	19.80	.Q	.	.	.	V	.
20.933	72.6536	19.75	.Q	.	.	.	V	.
20.950	72.6807	19.70	.Q	.	.	.	V	.
20.967	72.7078	19.66	.Q	.	.	.	V	.
20.983	72.7348	19.62	.Q	.	.	.	V	.
21.000	72.7618	19.57	.Q	.	.	.	V	.
21.017	72.7887	19.53	.Q	.	.	.	V	.
21.033	72.8156	19.49	.Q	.	.	.	V	.
21.050	72.8423	19.45	.Q	.	.	.	V	.

21.067	72.8691	19.41	.Q	.	.	.	V	.
21.083	72.8957	19.37	.Q	.	.	.	V	.
21.100	72.9224	19.32	.Q	.	.	.	V	.
21.117	72.9489	19.28	.Q	.	.	.	V	.
21.133	72.9754	19.24	.Q	.	.	.	V	.
21.150	73.0019	19.20	.Q	.	.	.	V	.
21.167	73.0283	19.16	.Q	.	.	.	V	.
21.183	73.0546	19.12	.Q	.	.	.	V	.
21.200	73.0809	19.08	.Q	.	.	.	V	.
21.217	73.1071	19.03	.Q	.	.	.	V	.
21.233	73.1332	18.99	.Q	.	.	.	V	.
21.250	73.1593	18.95	.Q	.	.	.	V	.
21.267	73.1854	18.91	.Q	.	.	.	V	.
21.283	73.2114	18.87	.Q	.	.	.	V	.
21.300	73.2373	18.83	.Q	.	.	.	V	.
21.317	73.2632	18.79	.Q	.	.	.	V	.
21.333	73.2890	18.76	.Q	.	.	.	V	.
21.350	73.3148	18.72	.Q	.	.	.	V	.
21.367	73.3406	18.68	.Q	.	.	.	V	.
21.383	73.3662	18.64	.Q	.	.	.	V	.
21.400	73.3919	18.61	.Q	.	.	.	V	.
21.417	73.4174	18.57	.Q	.	.	.	V	.
21.433	73.4430	18.53	.Q	.	.	.	V	.
21.450	73.4684	18.49	.Q	.	.	.	V	.
21.467	73.4939	18.46	.Q	.	.	.	V	.
21.483	73.5192	18.42	.Q	.	.	.	V	.
21.500	73.5446	18.38	.Q	.	.	.	V	.
21.517	73.5698	18.34	.Q	.	.	.	V	.
21.533	73.5950	18.31	.Q	.	.	.	V	.
21.550	73.6202	18.27	.Q	.	.	.	V	.
21.567	73.6453	18.23	.Q	.	.	.	V	.
21.583	73.6704	18.19	.Q	.	.	.	V	.
21.600	73.6954	18.16	.Q	.	.	.	V	.
21.617	73.7203	18.12	.Q	.	.	.	V	.
21.633	73.7453	18.09	.Q	.	.	.	V	.
21.650	73.7701	18.06	.Q	.	.	.	V	.
21.667	73.7950	18.02	.Q	.	.	.	V	.
21.683	73.8197	17.99	.Q	.	.	.	V	.
21.700	73.8445	17.95	.Q	.	.	.	V	.
21.717	73.8691	17.92	.Q	.	.	.	V	.
21.733	73.8938	17.89	.Q	.	.	.	V	.
21.750	73.9184	17.85	.Q	.	.	.	V	.
21.767	73.9429	17.82	.Q	.	.	.	V	.
21.783	73.9674	17.78	.Q	.	.	.	V	.
21.800	73.9919	17.75	.Q	.	.	.	V	.
21.817	74.0163	17.71	.Q	.	.	.	V	.
21.833	74.0406	17.68	.Q	.	.	.	V	.
21.850	74.0649	17.65	.Q	.	.	.	V	.
21.867	74.0892	17.61	.Q	.	.	.	V	.
21.883	74.1134	17.58	.Q	.	.	.	V	.
21.900	74.1376	17.54	.Q	.	.	.	V	.
21.917	74.1617	17.51	.Q	.	.	.	V	.
21.933	74.1858	17.48	.Q	.	.	.	V	.
21.950	74.2098	17.45	.Q	.	.	.	V	.
21.967	74.2338	17.42	.Q	.	.	.	V	.
21.983	74.2578	17.39	.Q	.	.	.	V	.
22.000	74.2817	17.36	.Q	.	.	.	V	.
22.017	74.3055	17.33	.Q	.	.	.	V	.

22.033	74.3293	17.29	.Q	.	.	.	V	.
22.050	74.3531	17.26	.Q	.	.	.	V	.
22.067	74.3769	17.23	.Q	.	.	.	V	.
22.083	74.4006	17.20	.Q	.	.	.	V	.
22.100	74.4242	17.17	.Q	.	.	.	V	.
22.117	74.4478	17.14	.Q	.	.	.	V	.
22.133	74.4714	17.11	.Q	.	.	.	V	.
22.150	74.4949	17.08	.Q	.	.	.	V	.
22.167	74.5184	17.04	.Q	.	.	.	V	.
22.183	74.5418	17.01	.Q	.	.	.	V	.
22.200	74.5652	16.98	.Q	.	.	.	V	.
22.217	74.5886	16.95	.Q	.	.	.	V	.
22.233	74.6119	16.92	.Q	.	.	.	V	.
22.250	74.6351	16.90	.Q	.	.	.	V	.
22.267	74.6584	16.87	.Q	.	.	.	V	.
22.283	74.6816	16.84	.Q	.	.	.	V	.
22.300	74.7047	16.81	.Q	.	.	.	V	.
22.317	74.7278	16.78	.Q	.	.	.	V	.
22.333	74.7509	16.75	.Q	.	.	.	V	.
22.350	74.7739	16.72	.Q	.	.	.	V	.
22.367	74.7969	16.69	.Q	.	.	.	V	.
22.383	74.8199	16.67	.Q	.	.	.	V	.
22.400	74.8428	16.64	.Q	.	.	.	V	.
22.417	74.8657	16.61	.Q	.	.	.	V	.
22.433	74.8885	16.58	.Q	.	.	.	V	.
22.450	74.9113	16.55	.Q	.	.	.	V	.
22.467	74.9341	16.52	.Q	.	.	.	V	.
22.483	74.9568	16.49	.Q	.	.	.	V	.
22.500	74.9795	16.47	.Q	.	.	.	V	.
22.517	75.0021	16.44	.Q	.	.	.	V	.
22.533	75.0247	16.41	.Q	.	.	.	V	.
22.550	75.0473	16.38	.Q	.	.	.	V	.
22.567	75.0698	16.36	.Q	.	.	.	V	.
22.583	75.0923	16.33	.Q	.	.	.	V	.
22.600	75.1148	16.30	.Q	.	.	.	V	.
22.617	75.1372	16.28	.Q	.	.	.	V	.
22.633	75.1596	16.25	.Q	.	.	.	V	.
22.650	75.1819	16.23	.Q	.	.	.	V	.
22.667	75.2042	16.20	.Q	.	.	.	V	.
22.683	75.2265	16.17	.Q	.	.	.	V	.
22.700	75.2488	16.15	.Q	.	.	.	V	.
22.717	75.2710	16.12	.Q	.	.	.	V	.
22.733	75.2931	16.09	.Q	.	.	.	V	.
22.750	75.3153	16.07	.Q	.	.	.	V	.
22.767	75.3373	16.04	.Q	.	.	.	V	.
22.783	75.3594	16.01	.Q	.	.	.	V	.
22.800	75.3814	15.99	.Q	.	.	.	V	.
22.817	75.4034	15.96	.Q	.	.	.	V	.
22.833	75.4254	15.94	.Q	.	.	.	V	.
22.850	75.4473	15.91	.Q	.	.	.	V	.
22.867	75.4692	15.89	.Q	.	.	.	V	.
22.883	75.4910	15.86	.Q	.	.	.	V	.
22.900	75.5128	15.84	.Q	.	.	.	V	.
22.917	75.5346	15.81	.Q	.	.	.	V	.
22.933	75.5564	15.79	.Q	.	.	.	V	.
22.950	75.5781	15.76	.Q	.	.	.	V	.
22.967	75.5997	15.74	.Q	.	.	.	V	.
22.983	75.6214	15.71	.Q	.	.	.	V	.

23.000	75.6430	15.69	.Q	.	.	.	V.
23.017	75.6646	15.67	.Q	.	.	.	V.
23.033	75.6861	15.64	.Q	.	.	.	V.
23.050	75.7076	15.62	.Q	.	.	.	V.
23.067	75.7291	15.59	.Q	.	.	.	V.
23.083	75.7506	15.57	.Q	.	.	.	V.
23.100	75.7720	15.54	.Q	.	.	.	V.
23.117	75.7933	15.52	.Q	.	.	.	V.
23.133	75.8147	15.49	.Q	.	.	.	V.
23.150	75.8360	15.47	.Q	.	.	.	V.
23.167	75.8573	15.45	.Q	.	.	.	V.
23.183	75.8785	15.43	.Q	.	.	.	V.
23.200	75.8997	15.40	.Q	.	.	.	V.
23.217	75.9209	15.38	.Q	.	.	.	V.
23.233	75.9421	15.36	.Q	.	.	.	V.
23.250	75.9632	15.33	.Q	.	.	.	V.
23.267	75.9843	15.31	.Q	.	.	.	V.
23.283	76.0053	15.29	.Q	.	.	.	V.
23.300	76.0264	15.27	.Q	.	.	.	V.
23.317	76.0474	15.24	.Q	.	.	.	V.
23.333	76.0683	15.22	.Q	.	.	.	V.
23.350	76.0893	15.20	.Q	.	.	.	V.
23.367	76.1102	15.18	.Q	.	.	.	V.
23.383	76.1311	15.15	.Q	.	.	.	V.
23.400	76.1519	15.13	.Q	.	.	.	V.
23.417	76.1727	15.11	.Q	.	.	.	V.
23.433	76.1935	15.08	.Q	.	.	.	V.
23.450	76.2142	15.06	.Q	.	.	.	V.
23.467	76.2349	15.04	.Q	.	.	.	V.
23.483	76.2556	15.02	.Q	.	.	.	V.
23.500	76.2763	15.00	.Q	.	.	.	V.
23.517	76.2969	14.98	.Q	.	.	.	V.
23.533	76.3175	14.96	.Q	.	.	.	V.
23.550	76.3381	14.93	.Q	.	.	.	V.
23.567	76.3586	14.91	.Q	.	.	.	V.
23.583	76.3791	14.89	.Q	.	.	.	V.
23.600	76.3996	14.87	.Q	.	.	.	V.
23.617	76.4201	14.85	.Q	.	.	.	V.
23.633	76.4405	14.83	.Q	.	.	.	V.
23.650	76.4609	14.81	.Q	.	.	.	V.
23.667	76.4813	14.79	.Q	.	.	.	V.
23.683	76.5016	14.76	.Q	.	.	.	V.
23.700	76.5219	14.74	.Q	.	.	.	V.
23.717	76.5422	14.72	.Q	.	.	.	V.
23.733	76.5624	14.70	.Q	.	.	.	V.
23.750	76.5827	14.68	.Q	.	.	.	V.
23.767	76.6029	14.66	.Q	.	.	.	V.
23.783	76.6230	14.64	.Q	.	.	.	V.
23.800	76.6432	14.62	.Q	.	.	.	V.
23.817	76.6633	14.60	.Q	.	.	.	V.
23.833	76.6833	14.58	.Q	.	.	.	V.
23.850	76.7034	14.56	.Q	.	.	.	V.
23.867	76.7234	14.54	.Q	.	.	.	V.
23.883	76.7434	14.52	.Q	.	.	.	V.
23.900	76.7634	14.50	.Q	.	.	.	V.
23.917	76.7833	14.48	.Q	.	.	.	V.
23.933	76.8033	14.46	.Q	.	.	.	V.
23.950	76.8232	14.44	.Q	.	.	.	V.

23.967	76.8430	14.42	.Q	.	.	.	V.
23.983	76.8629	14.40	.Q	.	.	.	V.
24.000	76.8827	14.38	.Q	.	.	.	V.
24.017	76.9025	14.36	.Q	.	.	.	V.
24.033	76.9222	14.34	.Q	.	.	.	V.
24.050	76.9419	14.32	.Q	.	.	.	V.
24.067	76.9616	14.24	.Q	.	.	.	V.
24.083	76.9803	13.61	.Q	.	.	.	V.
24.100	76.9980	12.84	Q	.	.	.	V.
24.117	77.0146	12.07	Q	.	.	.	V.
24.133	77.0302	11.30	Q	.	.	.	V.
24.150	77.0447	10.53	Q	.	.	.	V.
24.167	77.0581	9.76	Q	.	.	.	V.
24.183	77.0705	9.00	Q	.	.	.	V.
24.200	77.0819	8.23	Q	.	.	.	V.
24.217	77.0921	7.46	Q	.	.	.	V.
24.233	77.1013	6.69	Q	.	.	.	V.
24.250	77.1095	5.92	Q	.	.	.	V.
24.267	77.1166	5.15	Q	.	.	.	V.
24.283	77.1226	4.38	Q	.	.	.	V.
24.300	77.1276	3.61	Q	.	.	.	V.
24.317	77.1315	2.84	Q	.	.	.	V.
24.333	77.1344	2.08	Q	.	.	.	V.
24.350	77.1362	1.31	Q	.	.	.	V.
24.367	77.1369	0.54	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1462.0
10%	1165.0
20%	305.0
30%	180.0
40%	145.0
50%	125.0
60%	100.0
70%	75.0
80%	50.0
90%	25.0

FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2

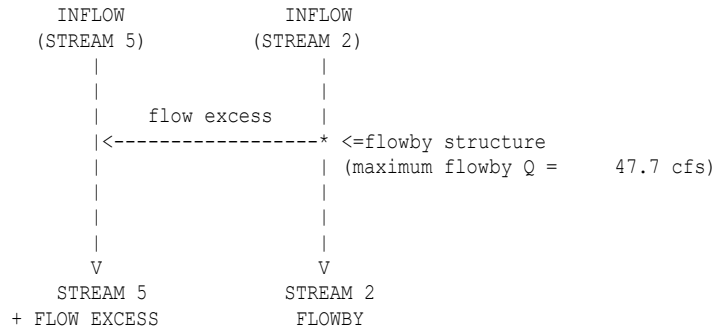
>>>>FLOWBY STRUCTURE ROUTING MODEL APPLIED TO STREAM #2<<<<<

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

DATA PAIR NUMBER	Qcenter (CFS)	Qpass (CFS)
-	0.00	0.00

1	25.00	13.59
2	75.00	16.84
3	100.00	18.46
4	250.00	28.22
5	550.00	47.73

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5



FLOWBY BASIN MODELING RESULTS:

MODEL TIME (HRS)	INFLOW (STREAM 5) (CFS)	INFLOW (STREAM 2) (CFS)	OUTFLOW (STREAM 5) (CFS)	FLOWBY (STREAM 2) (CFS)
10.000	0.00	25.40	11.78	13.62
10.017	0.00	25.45	11.84	13.62
10.033	0.00	25.51	11.89	13.62
10.050	0.00	25.57	11.94	13.63
10.067	0.00	25.62	11.99	13.63
10.083	0.00	25.68	12.04	13.63
10.100	0.00	25.73	12.10	13.64
10.117	0.00	25.79	12.15	13.64
10.133	0.00	25.82	12.18	13.64
10.150	0.00	25.85	12.21	13.65
10.167	0.00	25.88	12.24	13.65
10.183	0.00	25.91	12.26	13.65
10.200	0.00	25.94	12.29	13.65
10.217	0.00	25.98	12.32	13.65
10.233	0.00	26.01	12.35	13.66
10.250	0.00	26.04	12.38	13.66
10.267	0.00	26.07	12.41	13.66
10.283	0.00	26.10	12.44	13.66
10.300	0.00	26.13	12.46	13.66
10.317	0.00	26.16	12.49	13.67
10.333	0.00	26.19	12.52	13.67
10.350	0.00	26.22	12.55	13.67
10.367	0.00	26.25	12.58	13.67
10.383	0.00	26.28	12.61	13.67
10.400	0.00	26.31	12.63	13.68
10.417	0.00	26.34	12.66	13.68
10.433	0.00	26.38	12.70	13.68
10.450	0.00	26.45	12.76	13.68

10.467	0.00	26.51	12.82	13.69
10.483	0.00	26.58	12.89	13.69
10.500	0.00	26.65	12.95	13.70
10.517	0.00	26.71	13.01	13.70
10.533	0.00	26.78	13.07	13.71
10.550	0.00	26.84	13.13	13.71
10.567	0.00	26.91	13.20	13.71
10.583	0.00	26.98	13.26	13.72
10.600	0.00	27.04	13.32	13.72
10.617	0.00	27.11	13.38	13.73
10.633	0.00	27.18	13.44	13.73
10.650	0.00	27.24	13.51	13.74
10.667	0.00	27.31	13.57	13.74
10.683	0.00	27.37	13.63	13.74
10.700	0.00	27.44	13.69	13.75
10.717	0.00	27.51	13.75	13.75
10.733	0.00	27.57	13.81	13.76
10.750	0.00	27.62	13.86	13.76
10.767	0.00	27.65	13.89	13.76
10.783	0.00	27.69	13.93	13.76
10.800	0.00	27.73	13.96	13.77
10.817	0.00	27.76	13.99	13.77
10.833	0.00	27.80	14.03	13.77
10.850	0.00	27.84	14.06	13.77
10.867	0.00	27.87	14.10	13.78
10.883	0.00	27.91	14.13	13.78
10.900	0.00	27.94	14.16	13.78
10.917	0.00	27.98	14.20	13.78
10.933	0.00	28.02	14.23	13.79
10.950	0.00	28.05	14.26	13.79
10.967	0.00	28.09	14.30	13.79
10.983	0.00	28.13	14.33	13.79
11.000	0.00	28.16	14.37	13.80
11.017	0.00	28.20	14.40	13.80
11.033	0.00	28.23	14.43	13.80
11.050	0.00	28.28	14.48	13.80
11.067	0.00	28.36	14.55	13.81
11.083	0.00	28.44	14.62	13.81
11.100	0.00	28.52	14.70	13.82
11.117	0.00	28.60	14.77	13.82
11.133	0.00	28.67	14.85	13.83
11.150	0.00	28.75	14.92	13.83
11.167	0.00	28.83	15.00	13.84
11.183	0.00	28.91	15.07	13.84
11.200	0.00	28.99	15.15	13.85
11.217	0.00	29.07	15.22	13.85
11.233	0.00	29.15	15.29	13.86
11.250	0.00	29.23	15.37	13.87
11.267	0.00	29.31	15.44	13.87
11.283	0.00	29.39	15.52	13.88
11.300	0.00	29.47	15.59	13.88
11.317	0.00	29.55	15.67	13.89
11.333	0.00	29.63	15.74	13.89
11.350	0.00	29.71	15.82	13.90
11.367	0.00	29.78	15.88	13.90
11.383	0.00	29.82	15.92	13.90
11.400	0.00	29.87	15.96	13.91
11.417	0.00	29.91	16.00	13.91

11.433	0.00	29.95	16.04	13.91
11.450	0.00	30.00	16.08	13.91
11.467	0.00	30.04	16.12	13.92
11.483	0.00	30.09	16.17	13.92
11.500	0.00	30.13	16.21	13.92
11.517	0.00	30.18	16.25	13.93
11.533	0.00	30.22	16.29	13.93
11.550	0.00	30.26	16.33	13.93
11.567	0.00	30.31	16.37	13.94
11.583	0.00	30.35	16.41	13.94
11.600	0.00	30.40	16.46	13.94
11.617	0.00	30.44	16.50	13.94
11.633	0.00	30.49	16.54	13.95
11.650	0.00	30.53	16.58	13.95
11.667	0.00	30.58	16.63	13.95
11.683	0.00	30.67	16.71	13.96
11.700	0.00	30.77	16.80	13.96
11.717	0.00	30.87	16.89	13.97
11.733	0.00	30.96	16.99	13.98
11.750	0.00	31.06	17.08	13.98
11.767	0.00	31.16	17.17	13.99
11.783	0.00	31.26	17.26	14.00
11.800	0.00	31.36	17.36	14.00
11.817	0.00	31.46	17.45	14.01
11.833	0.00	31.56	17.54	14.02
11.850	0.00	31.66	17.63	14.02
11.867	0.00	31.76	17.73	14.03
11.883	0.00	31.85	17.82	14.04
11.900	0.00	31.95	17.91	14.04
11.917	0.00	32.05	18.00	14.05
11.933	0.00	32.15	18.10	14.05
11.950	0.00	32.25	18.19	14.06
11.967	0.00	32.35	18.28	14.07
11.983	0.00	32.49	18.41	14.08
12.000	0.00	32.70	18.61	14.09
12.017	0.00	32.92	18.82	14.11
12.033	0.00	33.14	19.02	14.12
12.050	0.00	33.36	19.23	14.13
12.067	0.00	33.58	19.43	14.15
12.083	0.00	33.80	19.64	14.16
12.100	0.00	34.02	19.85	14.18
12.117	0.00	34.24	20.05	14.19
12.133	0.00	34.46	20.26	14.20
12.150	0.00	34.68	20.46	14.22
12.167	0.00	34.90	20.67	14.23
12.183	0.00	35.12	20.87	14.25
12.200	0.00	35.34	21.08	14.26
12.217	0.00	35.56	21.28	14.28
12.233	0.00	35.78	21.49	14.29
12.250	0.00	36.00	21.69	14.30
12.267	0.00	36.22	21.90	14.32
12.283	0.00	36.44	22.11	14.33
12.300	0.00	36.81	22.45	14.36
12.317	0.00	37.24	22.85	14.39
12.333	0.00	37.67	23.26	14.41
12.350	0.00	38.10	23.66	14.44
12.367	0.00	38.53	24.06	14.47
12.383	0.00	38.96	24.47	14.50

12.400	0.00	39.39	24.87	14.53
12.417	0.00	39.83	25.27	14.55
12.433	0.00	40.26	25.67	14.58
12.450	0.00	40.69	26.08	14.61
12.467	0.00	41.12	26.48	14.64
12.483	0.00	41.55	26.88	14.67
12.500	0.00	41.98	27.29	14.69
12.517	0.00	42.41	27.69	14.72
12.533	0.00	42.84	28.09	14.75
12.550	0.00	43.28	28.50	14.78
12.567	0.00	43.71	28.90	14.81
12.583	0.00	44.14	29.30	14.83
12.600	0.00	44.50	29.65	14.86
12.617	0.00	44.61	29.74	14.86
12.633	0.00	44.69	29.82	14.87
12.650	0.00	44.76	29.89	14.87
12.667	0.00	44.84	29.96	14.88
12.683	0.00	44.91	30.03	14.88
12.700	0.00	44.99	30.10	14.89
12.717	0.00	45.07	30.17	14.89
12.733	0.00	45.14	30.24	14.90
12.750	0.00	45.22	30.32	14.90
12.767	0.00	45.30	30.39	14.91
12.783	0.00	45.37	30.46	14.91
12.800	0.00	45.45	30.53	14.92
12.817	0.00	45.52	30.60	14.92
12.833	0.00	45.60	30.67	14.93
12.850	0.00	45.68	30.74	14.93
12.867	0.00	45.75	30.81	14.94
12.883	0.00	45.83	30.89	14.94
12.900	0.00	45.91	30.96	14.95
12.917	0.00	46.03	31.07	14.96
12.933	0.00	46.21	31.24	14.97
12.950	0.00	46.38	31.40	14.98
12.967	0.00	46.56	31.57	14.99
12.983	0.00	46.74	31.73	15.00
13.000	0.00	46.91	31.90	15.01
13.017	0.00	47.09	32.06	15.03
13.033	0.00	47.26	32.23	15.04
13.050	0.00	47.44	32.39	15.05
13.067	0.00	47.62	32.56	15.06
13.083	0.00	47.79	32.72	15.07
13.100	0.00	47.97	32.88	15.08
13.117	0.00	48.14	33.05	15.09
13.133	0.00	48.32	33.21	15.11
13.150	0.00	48.50	33.38	15.12
13.167	0.00	48.67	33.54	15.13
13.183	0.00	48.85	33.71	15.14
13.200	0.00	49.02	33.87	15.15
13.217	0.00	49.19	34.03	15.16
13.233	0.00	49.31	34.14	15.17
13.250	0.00	49.41	34.24	15.18
13.267	0.00	49.52	34.33	15.18
13.283	0.00	49.62	34.43	15.19
13.300	0.00	49.72	34.52	15.20
13.317	0.00	49.82	34.62	15.20
13.333	0.00	49.93	34.72	15.21
13.350	0.00	50.03	34.81	15.22

13.367	0.00	50.13	34.91	15.22
13.383	0.00	50.23	35.00	15.23
13.400	0.00	50.34	35.10	15.24
13.417	0.00	50.44	35.20	15.24
13.433	0.00	50.54	35.29	15.25
13.450	0.00	50.65	35.39	15.26
13.467	0.00	50.75	35.48	15.26
13.483	0.00	50.85	35.58	15.27
13.500	0.00	50.95	35.68	15.28
13.517	0.00	51.06	35.77	15.28
13.533	0.00	51.20	35.91	15.29
13.550	0.00	51.45	36.14	15.31
13.567	0.00	51.69	36.37	15.32
13.583	0.00	51.94	36.60	15.34
13.600	0.00	52.18	36.83	15.36
13.617	0.00	52.43	37.05	15.37
13.633	0.00	52.67	37.28	15.39
13.650	0.00	52.92	37.51	15.40
13.667	0.00	53.16	37.74	15.42
13.683	0.00	53.41	37.97	15.44
13.700	0.00	53.65	38.20	15.45
13.717	0.00	53.90	38.43	15.47
13.733	0.00	54.14	38.66	15.48
13.750	0.00	54.39	38.89	15.50
13.767	0.00	54.63	39.12	15.52
13.783	0.00	54.88	39.35	15.53
13.800	0.00	55.13	39.58	15.55
13.817	0.00	55.37	39.81	15.56
13.833	0.00	55.61	40.03	15.58
13.850	0.00	55.79	40.20	15.59
13.867	0.00	55.94	40.34	15.60
13.883	0.00	56.09	40.48	15.61
13.900	0.00	56.24	40.62	15.62
13.917	0.00	56.39	40.76	15.63
13.933	0.00	56.54	40.90	15.64
13.950	0.00	56.69	41.04	15.65
13.967	0.00	56.83	41.18	15.66
13.983	0.00	56.98	41.31	15.67
14.000	0.00	57.13	41.45	15.68
14.017	0.00	57.28	41.59	15.69
14.033	0.00	57.43	41.73	15.70
14.050	0.00	57.58	41.87	15.71
14.067	0.00	57.73	42.01	15.72
14.083	0.00	57.88	42.15	15.73
14.100	0.00	58.02	42.29	15.74
14.117	0.00	58.17	42.43	15.75
14.133	0.00	58.32	42.57	15.76
14.150	0.00	58.51	42.75	15.77
14.167	0.00	58.89	43.09	15.79
14.183	0.00	59.28	43.46	15.82
14.200	0.00	59.67	43.83	15.84
14.217	0.00	60.06	44.20	15.87
14.233	0.00	60.46	44.56	15.89
14.250	0.00	60.85	44.93	15.92
14.267	0.00	61.24	45.30	15.95
14.283	0.00	61.63	45.66	15.97
14.300	0.00	62.03	46.03	16.00
14.317	0.00	62.42	46.40	16.02

14.333	0.00	62.81	46.76	16.05
14.350	0.00	63.20	47.13	16.07
14.367	0.00	63.60	47.50	16.10
14.383	0.00	63.99	47.86	16.12
14.400	0.00	64.38	48.23	16.15
14.417	0.00	64.77	48.60	16.18
14.433	0.00	65.17	48.96	16.20
14.450	0.00	65.56	49.33	16.23
14.467	0.00	65.88	49.63	16.25
14.483	0.00	66.12	49.86	16.26
14.500	0.00	66.36	50.08	16.28
14.517	0.00	66.60	50.31	16.29
14.533	0.00	66.85	50.54	16.31
14.550	0.00	67.09	50.76	16.33
14.567	0.00	67.33	50.99	16.34
14.583	0.00	67.58	51.22	16.36
14.600	0.00	67.82	51.45	16.37
14.617	0.00	68.06	51.67	16.39
14.633	0.00	68.31	51.90	16.40
14.650	0.00	68.55	52.13	16.42
14.667	0.00	68.79	52.35	16.44
14.683	0.00	69.03	52.58	16.45
14.700	0.00	69.28	52.81	16.47
14.717	0.00	69.52	53.04	16.48
14.733	0.00	69.76	53.26	16.50
14.750	0.00	70.01	53.49	16.52
14.767	0.00	70.28	53.75	16.53
14.783	0.00	70.88	54.31	16.57
14.800	0.00	71.56	54.94	16.62
14.817	0.00	72.24	55.58	16.66
14.833	0.00	72.92	56.21	16.70
14.850	0.00	73.59	56.84	16.75
14.867	0.00	74.27	57.48	16.79
14.883	0.00	74.95	58.11	16.84
14.900	0.00	75.62	58.74	16.88
14.917	0.00	76.30	59.38	16.92
14.933	0.00	76.98	60.01	16.97
14.950	0.00	77.66	60.64	17.01
14.967	0.00	78.33	61.28	17.06
14.983	0.00	79.01	61.91	17.10
15.000	0.00	79.69	62.54	17.14
15.017	0.00	80.37	63.18	17.19
15.033	0.00	81.04	63.81	17.23
15.050	0.00	81.72	64.45	17.28
15.067	0.00	82.40	65.08	17.32
15.083	0.00	83.02	65.66	17.36
15.100	0.00	83.53	66.13	17.39
15.117	0.00	84.03	66.60	17.43
15.133	0.00	84.53	67.07	17.46
15.150	0.00	85.03	67.54	17.49
15.167	0.00	85.54	68.01	17.52
15.183	0.00	86.04	68.48	17.56
15.200	0.00	86.54	68.95	17.59
15.217	0.00	87.04	69.42	17.62
15.233	0.00	87.55	69.89	17.65
15.250	0.00	88.05	70.36	17.69
15.267	0.00	88.55	70.83	17.72
15.283	0.00	89.06	71.31	17.75

15.300	0.00	89.56	71.78	17.78
15.317	0.00	90.06	72.25	17.82
15.333	0.00	90.56	72.72	17.85
15.350	0.00	91.07	73.19	17.88
15.367	0.00	91.57	73.66	17.91
15.383	0.00	92.08	74.14	17.95
15.400	0.00	93.01	75.00	18.01
15.417	0.00	94.13	76.05	18.08
15.433	0.00	95.25	77.10	18.15
15.450	0.00	96.37	78.15	18.23
15.467	0.00	97.50	79.20	18.30
15.483	0.00	98.62	80.25	18.37
15.500	0.00	99.74	81.30	18.44
15.517	0.00	100.86	82.34	18.52
15.533	0.00	101.98	83.39	18.59
15.550	0.00	103.10	84.44	18.66
15.567	0.00	104.23	85.49	18.73
15.583	0.00	105.35	86.54	18.81
15.600	0.00	106.47	87.59	18.88
15.617	0.00	107.59	88.64	18.95
15.633	0.00	108.71	89.69	19.03
15.650	0.00	109.83	90.73	19.10
15.667	0.00	110.96	91.78	19.17
15.683	0.00	112.08	92.83	19.25
15.700	0.00	113.48	94.14	19.34
15.717	0.00	116.02	96.52	19.50
15.733	0.00	118.68	99.01	19.68
15.750	0.00	121.35	101.50	19.85
15.767	0.00	124.01	103.99	20.02
15.783	0.00	126.68	106.48	20.20
15.800	0.00	129.34	108.97	20.37
15.817	0.00	132.00	111.46	20.54
15.833	0.00	134.67	113.95	20.72
15.850	0.00	137.33	116.44	20.89
15.867	0.00	140.00	118.93	21.06
15.883	0.00	142.66	121.43	21.24
15.900	0.00	145.33	123.92	21.41
15.917	0.00	147.99	126.41	21.58
15.933	0.00	150.66	128.90	21.76
15.950	0.00	153.32	131.39	21.93
15.967	0.00	155.98	133.88	22.10
15.983	0.00	158.65	136.37	22.28
16.000	0.00	161.31	138.86	22.45
16.017	0.00	172.63	149.44	23.19
16.033	0.00	192.59	168.10	24.48
16.050	0.00	212.55	186.76	25.78
16.067	0.00	232.51	205.43	27.08
16.083	0.00	252.47	224.09	28.38
16.100	0.00	272.43	242.75	29.68
16.117	0.00	292.39	261.42	30.98
16.133	0.00	312.36	280.08	32.28
16.150	0.00	332.32	298.74	33.57
16.167	0.00	352.28	317.41	34.87
16.183	0.00	372.24	336.07	36.17
16.200	0.00	392.20	354.73	37.47
16.217	0.00	412.16	373.40	38.77
16.233	0.00	432.12	392.06	40.06
16.250	0.00	452.08	410.72	41.36

16.267	0.00	472.05	429.39	42.66
16.283	0.00	492.01	448.05	43.96
16.300	0.00	511.97	466.71	45.26
16.317	0.00	533.93	487.24	46.68
16.333	0.00	513.04	467.72	45.33
16.350	0.00	489.84	446.03	43.82
16.367	0.00	466.64	424.33	42.31
16.383	0.00	443.44	402.64	40.80
16.400	0.00	420.24	380.95	39.29
16.417	0.00	397.04	359.26	37.78
16.433	0.00	373.84	337.57	36.27
16.450	0.00	350.64	315.88	34.76
16.467	0.00	327.44	294.18	33.26
16.483	0.00	304.24	272.49	31.75
16.500	0.00	281.04	250.80	30.24
16.517	0.00	257.84	229.11	28.73
16.533	0.00	234.64	207.42	27.22
16.550	0.00	211.44	185.73	25.71
16.567	0.00	188.24	164.03	24.20
16.583	0.00	165.03	142.34	22.69
16.600	0.00	141.83	120.65	21.18
16.617	0.00	118.63	98.96	19.67
16.633	0.00	102.40	83.78	18.62
16.650	0.00	100.54	82.04	18.49
16.667	0.00	99.11	80.71	18.40
16.683	0.00	97.68	79.37	18.31
16.700	0.00	96.25	78.03	18.22
16.717	0.00	94.82	76.70	18.12
16.733	0.00	93.39	75.36	18.03
16.750	0.00	91.97	74.03	17.94
16.767	0.00	90.54	72.69	17.85
16.783	0.00	89.11	71.36	17.75
16.800	0.00	87.68	70.02	17.66
16.817	0.00	86.25	68.68	17.57
16.833	0.00	84.82	67.35	17.48
16.850	0.00	83.40	66.01	17.38
16.867	0.00	81.97	64.68	17.29
16.883	0.00	80.54	63.34	17.20
16.900	0.00	79.11	62.00	17.11
16.917	0.00	77.68	60.67	17.01
16.933	0.00	76.27	59.35	16.92
16.950	0.00	75.30	58.44	16.86
16.967	0.00	74.55	57.74	16.81
16.983	0.00	73.80	57.04	16.76
17.000	0.00	73.05	56.34	16.71
17.017	0.00	72.30	55.64	16.66
17.033	0.00	71.55	54.94	16.62
17.050	0.00	70.80	54.24	16.57
17.067	0.00	70.05	53.53	16.52
17.083	0.00	69.30	52.83	16.47
17.100	0.00	68.55	52.13	16.42
17.117	0.00	67.80	51.43	16.37
17.133	0.00	67.05	50.73	16.32
17.150	0.00	66.30	50.03	16.27
17.167	0.00	65.55	49.33	16.23
17.183	0.00	64.80	48.63	16.18
17.200	0.00	64.05	47.93	16.13
17.217	0.00	63.30	47.22	16.08

17.233	0.00	62.55	46.52	16.03
17.250	0.00	61.86	45.87	15.99
17.267	0.00	61.37	45.42	15.95
17.283	0.00	60.91	44.98	15.92
17.300	0.00	60.44	44.55	15.89
17.317	0.00	59.98	44.12	15.86
17.333	0.00	59.52	43.68	15.83
17.350	0.00	59.06	43.25	15.80
17.367	0.00	58.59	42.82	15.77
17.383	0.00	58.13	42.39	15.74
17.400	0.00	57.67	41.95	15.71
17.417	0.00	57.20	41.52	15.68
17.433	0.00	56.74	41.09	15.65
17.450	0.00	56.28	40.65	15.62
17.467	0.00	55.81	40.22	15.59
17.483	0.00	55.35	39.79	15.56
17.500	0.00	54.89	39.36	15.53
17.517	0.00	54.43	38.92	15.50
17.533	0.00	53.96	38.49	15.47
17.550	0.00	53.50	38.06	15.44
17.567	0.00	53.11	37.70	15.42
17.583	0.00	52.80	37.41	15.40
17.600	0.00	52.49	37.12	15.38
17.617	0.00	52.18	36.83	15.36
17.633	0.00	51.87	36.54	15.34
17.650	0.00	51.56	36.25	15.32
17.667	0.00	51.25	35.96	15.30
17.683	0.00	50.94	35.67	15.28
17.700	0.00	50.63	35.38	15.26
17.717	0.00	50.32	35.09	15.24
17.733	0.00	50.01	34.80	15.22
17.750	0.00	49.70	34.51	15.20
17.767	0.00	49.39	34.22	15.18
17.783	0.00	49.08	33.93	15.16
17.800	0.00	48.77	33.64	15.14
17.817	0.00	48.46	33.35	15.11
17.833	0.00	48.15	33.06	15.09
17.850	0.00	47.84	32.77	15.07
17.867	0.00	47.54	32.48	15.05
17.883	0.00	47.29	32.25	15.04
17.900	0.00	47.06	32.04	15.02
17.917	0.00	46.83	31.82	15.01
17.933	0.00	46.60	31.61	14.99
17.950	0.00	46.37	31.39	14.98
17.967	0.00	46.14	31.18	14.96
17.983	0.00	45.91	30.97	14.95
18.000	0.00	45.69	30.75	14.93
18.017	0.00	45.46	30.54	14.92
18.033	0.00	45.23	30.32	14.90
18.050	0.00	45.00	30.11	14.89
18.067	0.00	44.77	29.89	14.87
18.083	0.00	44.54	29.68	14.86
18.100	0.00	44.31	29.46	14.84
18.117	0.00	44.08	29.25	14.83
18.133	0.00	43.85	29.03	14.82
18.150	0.00	43.62	28.82	14.80
18.167	0.00	43.39	28.60	14.79
18.183	0.00	43.03	28.27	14.76

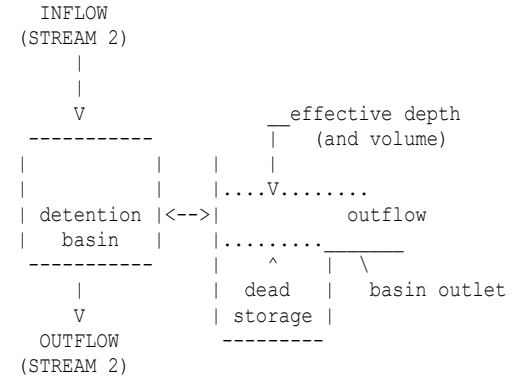
18.200	0.00	42.41	27.68	14.72
18.217	0.00	41.77	27.09	14.68
18.233	0.00	41.14	26.50	14.64
18.250	0.00	40.51	25.91	14.60
18.267	0.00	39.88	25.32	14.56
18.283	0.00	39.24	24.73	14.52
18.300	0.00	38.61	24.14	14.47
18.317	0.00	37.98	23.54	14.43
18.333	0.00	37.35	22.95	14.39
18.350	0.00	36.71	22.36	14.35
18.367	0.00	36.08	21.77	14.31
18.383	0.00	35.45	21.18	14.27
18.400	0.00	34.82	20.59	14.23
18.417	0.00	34.18	20.00	14.19
18.433	0.00	33.55	19.40	14.15
18.450	0.00	32.92	18.81	14.10
18.467	0.00	32.29	18.22	14.06
18.483	0.00	31.66	17.64	14.02
18.500	0.00	31.37	17.37	14.00
18.517	0.00	31.24	17.24	14.00
18.533	0.00	31.10	17.12	13.99
18.550	0.00	30.97	16.99	13.98
18.567	0.00	30.84	16.87	13.97
18.583	0.00	30.70	16.74	13.96
18.600	0.00	30.57	16.62	13.95
18.617	0.00	30.44	16.49	13.94
18.633	0.00	30.30	16.37	13.93
18.650	0.00	30.17	16.24	13.93
18.667	0.00	30.04	16.12	13.92
18.683	0.00	29.90	16.00	13.91
18.700	0.00	29.77	15.87	13.90
18.717	0.00	29.64	15.75	13.89
18.733	0.00	29.50	15.62	13.88
18.750	0.00	29.37	15.50	13.87
18.767	0.00	29.24	15.37	13.87
18.783	0.00	29.11	15.25	13.86
18.800	0.00	28.98	15.13	13.85
18.817	0.00	28.87	15.02	13.84
18.833	0.00	28.76	14.92	13.83
18.850	0.00	28.65	14.82	13.83
18.867	0.00	28.54	14.72	13.82
18.883	0.00	28.43	14.62	13.81
18.900	0.00	28.32	14.51	13.81
18.917	0.00	28.21	14.41	13.80
18.933	0.00	28.10	14.31	13.79
18.950	0.00	27.99	14.21	13.78
18.967	0.00	27.88	14.11	13.78
18.983	0.00	27.78	14.01	13.77
19.000	0.00	27.67	13.90	13.76
19.017	0.00	27.56	13.80	13.76
19.033	0.00	27.45	13.70	13.75
19.050	0.00	27.34	13.60	13.74
19.067	0.00	27.23	13.50	13.74
19.083	0.00	27.12	13.39	13.73
19.100	0.00	27.01	13.29	13.72
19.117	0.00	26.91	13.20	13.71
19.133	0.00	26.82	13.11	13.71
19.150	0.00	26.73	13.03	13.70

19.167	0.00	26.64	12.94	13.70
19.183	0.00	26.55	12.86	13.69
19.200	0.00	26.46	12.77	13.68
19.217	0.00	26.37	12.69	13.68
19.233	0.00	26.27	12.60	13.67
19.250	0.00	26.18	12.52	13.67
19.267	0.00	26.09	12.43	13.66
19.283	0.00	26.00	12.35	13.66
19.300	0.00	25.91	12.26	13.65
19.317	0.00	25.82	12.18	13.64
19.333	0.00	25.73	12.09	13.64
19.350	0.00	25.64	12.00	13.63
19.367	0.00	25.54	11.92	13.63
19.383	0.00	25.45	11.83	13.62
19.400	0.00	25.36	11.75	13.61
19.417	0.00	25.27	11.66	13.61
19.433	0.00	25.19	11.59	13.60
19.450	0.00	25.11	11.52	13.60
19.467	0.00	25.04	11.44	13.59
19.483	0.00	24.96	11.39	13.57
19.500	0.00	24.88	11.36	13.53
19.517	0.00	24.80	11.32	13.48
19.533	0.00	24.73	11.28	13.44
19.550	0.00	24.65	11.25	13.40
19.567	0.00	24.57	11.21	13.36
19.583	0.00	24.49	11.18	13.31
19.600	0.00	24.42	11.14	13.27
19.617	0.00	24.34	11.11	13.23
19.633	0.00	24.26	11.07	13.19
19.650	0.00	24.18	11.04	13.15
19.667	0.00	24.10	11.00	13.10
19.683	0.00	24.03	10.97	13.06
19.700	0.00	23.95	10.93	13.02
19.717	0.00	23.87	10.89	12.98
19.733	0.00	23.80	10.86	12.94
19.750	0.00	23.73	10.83	12.90
19.767	0.00	23.66	10.80	12.86
19.783	0.00	23.60	10.77	12.83
19.800	0.00	23.53	10.74	12.79
19.817	0.00	23.46	10.71	12.75
19.833	0.00	23.39	10.68	12.72
19.850	0.00	23.33	10.65	12.68
19.867	0.00	23.26	10.62	12.64
19.883	0.00	23.19	10.59	12.61
19.900	0.00	23.13	10.55	12.57
19.917	0.00	23.06	10.52	12.53
19.933	0.00	22.99	10.49	12.50
19.950	0.00	22.92	10.46	12.46
19.967	0.00	22.86	10.43	12.43
19.983	0.00	22.79	10.40	12.39
20.000	0.00	22.72	10.37	12.35

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FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.2
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>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #2<<<<
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ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

DEAD STORAGE(AF) = 2.070
SPECIFIED DEAD STORAGE(AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME(AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

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

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MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
(Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH (FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME (AF)
10.000	2.070	21.17	0.00	3.50	11.2	3.368
10.017	2.070	13.62	0.00	3.50	11.3	3.371
10.033	2.070	13.62	0.00	3.51	11.3	3.374
10.050	2.070	13.63	0.00	3.51	11.3	3.377
10.067	2.070	13.63	0.00	3.51	11.3	3.381

10.083	2.070	13.63	0.00	3.51	11.4	3.384
10.100	2.070	13.64	0.00	3.51	11.4	3.387
10.117	2.070	13.64	0.00	3.52	11.4	3.390
10.133	2.070	13.64	0.00	3.52	11.4	3.393
10.150	2.070	13.65	0.00	3.52	11.5	3.396
10.167	2.070	13.65	0.00	3.52	11.5	3.399
10.183	2.070	13.65	0.00	3.52	11.5	3.402
10.200	2.070	13.65	0.00	3.53	11.5	3.405
10.217	2.070	13.65	0.00	3.53	11.5	3.408
10.233	2.070	13.66	0.00	3.53	11.6	3.411
10.250	2.070	13.66	0.00	3.53	11.6	3.413
10.267	2.070	13.66	0.00	3.53	11.6	3.416
10.283	2.070	13.66	0.00	3.54	11.6	3.419
10.300	2.070	13.66	0.00	3.54	11.6	3.422
10.317	2.070	13.67	0.00	3.54	11.7	3.425
10.333	2.070	13.67	0.00	3.54	11.7	3.427
10.350	2.070	13.67	0.00	3.54	11.7	3.430
10.367	2.070	13.67	0.00	3.54	11.7	3.433
10.383	2.070	13.67	0.00	3.55	11.7	3.435
10.400	2.070	13.68	0.00	3.55	11.8	3.438
10.417	2.070	13.68	0.00	3.55	11.8	3.441
10.433	2.070	13.68	0.00	3.55	11.8	3.443
10.450	2.070	13.68	0.00	3.55	11.8	3.446
10.467	2.070	13.69	0.00	3.55	11.8	3.448
10.483	2.070	13.69	0.00	3.56	11.9	3.451
10.500	2.070	13.70	0.00	3.56	11.9	3.453
10.517	2.070	13.70	0.00	3.56	11.9	3.456
10.533	2.070	13.71	0.00	3.56	11.9	3.458
10.550	2.070	13.71	0.00	3.56	11.9	3.461
10.567	2.070	13.71	0.00	3.56	12.0	3.463
10.583	2.070	13.72	0.00	3.57	12.0	3.466
10.600	2.070	13.72	0.00	3.57	12.0	3.468
10.617	2.070	13.73	0.00	3.57	12.0	3.470
10.633	2.070	13.73	0.00	3.57	12.0	3.473
10.650	2.070	13.74	0.00	3.57	12.0	3.475
10.667	2.070	13.74	0.00	3.57	12.1	3.477
10.683	2.070	13.74	0.00	3.57	12.1	3.480
10.700	2.070	13.75	0.00	3.58	12.1	3.482
10.717	2.070	13.75	0.00	3.58	12.1	3.484
10.733	2.070	13.76	0.00	3.58	12.1	3.486
10.750	2.070	13.76	0.00	3.58	12.1	3.489
10.767	2.070	13.76	0.00	3.58	12.2	3.491
10.783	2.070	13.76	0.00	3.58	12.2	3.493
10.800	2.070	13.77	0.00	3.59	12.2	3.495
10.817	2.070	13.77	0.00	3.59	12.2	3.497
10.833	2.070	13.77	0.00	3.59	12.2	3.499
10.850	2.070	13.77	0.00	3.59	12.2	3.502
10.867	2.070	13.78	0.00	3.59	12.3	3.504
10.883	2.070	13.78	0.00	3.59	12.3	3.506
10.900	2.070	13.78	0.00	3.59	12.3	3.508
10.917	2.070	13.78	0.00	3.59	12.3	3.510
10.933	2.070	13.79	0.00	3.60	12.3	3.512
10.950	2.070	13.79	0.00	3.60	12.3	3.514
10.967	2.070	13.79	0.00	3.60	12.3	3.516
10.983	2.070	13.79	0.00	3.60	12.4	3.518
11.000	2.070	13.80	0.00	3.60	12.4	3.520
11.017	2.070	13.80	0.00	3.60	12.4	3.522
11.033	2.070	13.80	0.00	3.60	12.4	3.524

11.050	2.070	13.80	0.00	3.60	12.4	3.526
11.067	2.070	13.81	0.00	3.61	12.4	3.527
11.083	2.070	13.81	0.00	3.61	12.4	3.529
11.100	2.070	13.82	0.00	3.61	12.5	3.531
11.117	2.070	13.82	0.00	3.61	12.5	3.533
11.133	2.070	13.83	0.00	3.61	12.5	3.535
11.150	2.070	13.83	0.00	3.61	12.5	3.537
11.167	2.070	13.84	0.00	3.61	12.5	3.539
11.183	2.070	13.84	0.00	3.61	12.5	3.540
11.200	2.070	13.85	0.00	3.62	12.5	3.542
11.217	2.070	13.85	0.00	3.62	12.6	3.544
11.233	2.070	13.86	0.00	3.62	12.6	3.546
11.250	2.070	13.87	0.00	3.62	12.6	3.548
11.267	2.070	13.87	0.00	3.62	12.6	3.549
11.283	2.070	13.88	0.00	3.62	12.6	3.551
11.300	2.070	13.88	0.00	3.62	12.6	3.553
11.317	2.070	13.89	0.00	3.62	12.6	3.555
11.333	2.070	13.89	0.00	3.63	12.6	3.556
11.350	2.070	13.90	0.00	3.63	12.7	3.558
11.367	2.070	13.90	0.00	3.63	12.7	3.560
11.383	2.070	13.90	0.00	3.63	12.7	3.561
11.400	2.070	13.91	0.00	3.63	12.7	3.563
11.417	2.070	13.91	0.00	3.63	12.7	3.565
11.433	2.070	13.91	0.00	3.63	12.7	3.566
11.450	2.070	13.91	0.00	3.63	12.7	3.568
11.467	2.070	13.92	0.00	3.63	12.7	3.570
11.483	2.070	13.92	0.00	3.63	12.8	3.571
11.500	2.070	13.92	0.00	3.64	12.8	3.573
11.517	2.070	13.93	0.00	3.64	12.8	3.574
11.533	2.070	13.93	0.00	3.64	12.8	3.576
11.550	2.070	13.93	0.00	3.64	12.8	3.577
11.567	2.070	13.94	0.00	3.64	12.8	3.579
11.583	2.070	13.94	0.00	3.64	12.8	3.581
11.600	2.070	13.94	0.00	3.64	12.8	3.582
11.617	2.070	13.94	0.00	3.64	12.8	3.584
11.633	2.070	13.95	0.00	3.64	12.9	3.585
11.650	2.070	13.95	0.00	3.64	12.9	3.587
11.667	2.070	13.95	0.00	3.65	12.9	3.588
11.683	2.070	13.96	0.00	3.65	12.9	3.590
11.700	2.070	13.96	0.00	3.65	12.9	3.591
11.717	2.070	13.97	0.00	3.65	12.9	3.592
11.733	2.070	13.98	0.00	3.65	12.9	3.594
11.750	2.070	13.98	0.00	3.65	12.9	3.595
11.767	2.070	13.99	0.00	3.65	12.9	3.597
11.783	2.070	14.00	0.00	3.65	13.0	3.598
11.800	2.070	14.00	0.00	3.65	13.0	3.600
11.817	2.070	14.01	0.00	3.65	13.0	3.601
11.833	2.070	14.02	0.00	3.66	13.0	3.603
11.850	2.070	14.02	0.00	3.66	13.0	3.604
11.867	2.070	14.03	0.00	3.66	13.0	3.605
11.883	2.070	14.04	0.00	3.66	13.0	3.607
11.900	2.070	14.04	0.00	3.66	13.0	3.608
11.917	2.070	14.05	0.00	3.66	13.0	3.610
11.933	2.070	14.05	0.00	3.66	13.0	3.611
11.950	2.070	14.06	0.00	3.66	13.1	3.612
11.967	2.070	14.07	0.00	3.66	13.1	3.614
11.983	2.070	14.08	0.00	3.66	13.1	3.615
12.000	2.070	14.09	0.00	3.66	13.1	3.616

12.017	2.070	14.11	0.00	3.67	13.1	3.618
12.033	2.070	14.12	0.00	3.67	13.1	3.619
12.050	2.070	14.13	0.00	3.67	13.1	3.621
12.067	2.070	14.15	0.00	3.67	13.1	3.622
12.083	2.070	14.16	0.00	3.67	13.1	3.623
12.100	2.070	14.18	0.00	3.67	13.2	3.625
12.117	2.070	14.19	0.00	3.67	13.2	3.626
12.133	2.070	14.20	0.00	3.67	13.2	3.628
12.150	2.070	14.22	0.00	3.67	13.2	3.629
12.167	2.070	14.23	0.00	3.67	13.2	3.631
12.183	2.070	14.25	0.00	3.67	13.2	3.632
12.200	2.070	14.26	0.00	3.68	13.2	3.633
12.217	2.070	14.28	0.00	3.68	13.2	3.635
12.233	2.070	14.29	0.00	3.68	13.2	3.636
12.250	2.070	14.30	0.00	3.68	13.2	3.638
12.267	2.070	14.32	0.00	3.68	13.3	3.639
12.283	2.070	14.33	0.00	3.68	13.3	3.641
12.300	2.070	14.36	0.00	3.68	13.3	3.642
12.317	2.070	14.39	0.00	3.68	13.3	3.644
12.333	2.070	14.41	0.00	3.68	13.3	3.645
12.350	2.070	14.44	0.00	3.68	13.3	3.647
12.367	2.070	14.47	0.00	3.69	13.3	3.648
12.383	2.070	14.50	0.00	3.69	13.3	3.650
12.400	2.070	14.53	0.00	3.69	13.3	3.652
12.417	2.070	14.55	0.00	3.69	13.4	3.653
12.433	2.070	14.58	0.00	3.69	13.4	3.655
12.450	2.070	14.61	0.00	3.69	13.4	3.657
12.467	2.070	14.64	0.00	3.69	13.4	3.658
12.483	2.070	14.67	0.00	3.69	13.4	3.660
12.500	2.070	14.69	0.00	3.69	13.4	3.662
12.517	2.070	14.72	0.00	3.70	13.4	3.664
12.533	2.070	14.75	0.00	3.70	13.4	3.665
12.550	2.070	14.78	0.00	3.70	13.5	3.667
12.567	2.070	14.81	0.00	3.70	13.5	3.669
12.583	2.070	14.83	0.00	3.70	13.5	3.671
12.600	2.070	14.86	0.00	3.70	13.5	3.673
12.617	2.070	14.86	0.00	3.70	13.5	3.675
12.633	2.070	14.87	0.00	3.70	13.5	3.676
12.650	2.070	14.87	0.00	3.70	13.5	3.678
12.667	2.070	14.88	0.00	3.71	13.6	3.680
12.683	2.070	14.88	0.00	3.71	13.6	3.682
12.700	2.070	14.89	0.00	3.71	13.6	3.684
12.717	2.070	14.89	0.00	3.71	13.6	3.686
12.733	2.070	14.90	0.00	3.71	13.6	3.687
12.750	2.070	14.90	0.00	3.71	13.6	3.689
12.767	2.070	14.91	0.00	3.71	13.6	3.691
12.783	2.070	14.91	0.00	3.71	13.6	3.693
12.800	2.070	14.92	0.00	3.72	13.7	3.694
12.817	2.070	14.92	0.00	3.72	13.7	3.696
12.833	2.070	14.93	0.00	3.72	13.7	3.698
12.850	2.070	14.93	0.00	3.72	13.7	3.699
12.867	2.070	14.94	0.00	3.72	13.7	3.701
12.883	2.070	14.94	0.00	3.72	13.7	3.703
12.900	2.070	14.95	0.00	3.72	13.7	3.704
12.917	2.070	14.96	0.00	3.72	13.7	3.706
12.933	2.070	14.97	0.00	3.72	13.8	3.708
12.950	2.070	14.98	0.00	3.73	13.8	3.709
12.967	2.070	14.99	0.00	3.73	13.8	3.711

12.983	2.070	15.00	0.00	3.73	13.8	3.713
13.000	2.070	15.01	0.00	3.73	13.8	3.714
13.017	2.070	15.03	0.00	3.73	13.8	3.716
13.033	2.070	15.04	0.00	3.73	13.8	3.718
13.050	2.070	15.05	0.00	3.73	13.8	3.719
13.067	2.070	15.06	0.00	3.73	13.9	3.721
13.083	2.070	15.07	0.00	3.73	13.9	3.723
13.100	2.070	15.08	0.00	3.73	13.9	3.724
13.117	2.070	15.09	0.00	3.74	13.9	3.726
13.133	2.070	15.11	0.00	3.74	13.9	3.728
13.150	2.070	15.12	0.00	3.74	13.9	3.729
13.167	2.070	15.13	0.00	3.74	13.9	3.731
13.183	2.070	15.14	0.00	3.74	13.9	3.733
13.200	2.070	15.15	0.00	3.74	14.0	3.734
13.217	2.070	15.16	0.00	3.74	14.0	3.736
13.233	2.070	15.17	0.00	3.74	14.0	3.738
13.250	2.070	15.18	0.00	3.74	14.0	3.739
13.267	2.070	15.18	0.00	3.75	14.0	3.741
13.283	2.070	15.19	0.00	3.75	14.0	3.742
13.300	2.070	15.20	0.00	3.75	14.0	3.744
13.317	2.070	15.20	0.00	3.75	14.0	3.746
13.333	2.070	15.21	0.00	3.75	14.1	3.747
13.350	2.070	15.22	0.00	3.75	14.1	3.749
13.367	2.070	15.22	0.00	3.75	14.1	3.750
13.383	2.070	15.23	0.00	3.75	14.1	3.752
13.400	2.070	15.24	0.00	3.75	14.1	3.754
13.417	2.070	15.24	0.00	3.75	14.1	3.755
13.433	2.070	15.25	0.00	3.76	14.1	3.757
13.450	2.070	15.26	0.00	3.76	14.1	3.758
13.467	2.070	15.26	0.00	3.76	14.1	3.760
13.483	2.070	15.27	0.00	3.76	14.2	3.761
13.500	2.070	15.28	0.00	3.76	14.2	3.763
13.517	2.070	15.28	0.00	3.76	14.2	3.764
13.533	2.070	15.29	0.00	3.76	14.2	3.766
13.550	2.070	15.31	0.00	3.76	14.2	3.767
13.567	2.070	15.32	0.00	3.76	14.2	3.769
13.583	2.070	15.34	0.00	3.76	14.2	3.770
13.600	2.070	15.36	0.00	3.77	14.2	3.772
13.617	2.070	15.37	0.00	3.77	14.2	3.774
13.633	2.070	15.39	0.00	3.77	14.3	3.775
13.650	2.070	15.40	0.00	3.77	14.3	3.777
13.667	2.070	15.42	0.00	3.77	14.3	3.778
13.683	2.070	15.44	0.00	3.77	14.3	3.780
13.700	2.070	15.45	0.00	3.77	14.3	3.781
13.717	2.070	15.47	0.00	3.77	14.3	3.783
13.733	2.070	15.48	0.00	3.77	14.3	3.785
13.750	2.070	15.50	0.00	3.78	14.3	3.786
13.767	2.070	15.52	0.00	3.78	14.4	3.788
13.783	2.070	15.53	0.00	3.78	14.4	3.789
13.800	2.070	15.55	0.00	3.78	14.4	3.791
13.817	2.070	15.56	0.00	3.78	14.4	3.793
13.833	2.070	15.58	0.00	3.78	14.4	3.794
13.850	2.070	15.59	0.00	3.78	14.4	3.796
13.867	2.070	15.60	0.00	3.78	14.4	3.797
13.883	2.070	15.61	0.00	3.78	14.4	3.799
13.900	2.070	15.62	0.00	3.78	14.4	3.801
13.917	2.070	15.63	0.00	3.79	14.5	3.802
13.933	2.070	15.64	0.00	3.79	14.5	3.804

13.950	2.070	15.65	0.00	3.79	14.5	3.806
13.967	2.070	15.66	0.00	3.79	14.5	3.807
13.983	2.070	15.67	0.00	3.79	14.5	3.809
14.000	2.070	15.68	0.00	3.79	14.5	3.810
14.017	2.070	15.69	0.00	3.79	14.5	3.812
14.033	2.070	15.70	0.00	3.79	14.5	3.814
14.050	2.070	15.71	0.00	3.79	14.6	3.815
14.067	2.070	15.72	0.00	3.80	14.6	3.817
14.083	2.070	15.73	0.00	3.80	14.6	3.818
14.100	2.070	15.74	0.00	3.80	14.6	3.820
14.117	2.070	15.75	0.00	3.80	14.6	3.821
14.133	2.070	15.76	0.00	3.80	14.6	3.823
14.150	2.070	15.77	0.00	3.80	14.6	3.825
14.167	2.070	15.79	0.00	3.80	14.6	3.826
14.183	2.070	15.82	0.00	3.80	14.6	3.828
14.200	2.070	15.84	0.00	3.80	14.7	3.829
14.217	2.070	15.87	0.00	3.80	14.7	3.831
14.233	2.070	15.89	0.00	3.81	14.7	3.833
14.250	2.070	15.92	0.00	3.81	14.7	3.834
14.267	2.070	15.95	0.00	3.81	14.7	3.836
14.283	2.070	15.97	0.00	3.81	14.7	3.838
14.300	2.070	16.00	0.00	3.81	14.7	3.840
14.317	2.070	16.02	0.00	3.81	14.7	3.841
14.333	2.070	16.05	0.00	3.81	14.8	3.843
14.350	2.070	16.07	0.00	3.81	14.8	3.845
14.367	2.070	16.10	0.00	3.81	14.8	3.847
14.383	2.070	16.12	0.00	3.82	14.8	3.849
14.400	2.070	16.15	0.00	3.82	14.8	3.850
14.417	2.070	16.18	0.00	3.82	14.8	3.852
14.433	2.070	16.20	0.00	3.82	14.8	3.854
14.450	2.070	16.23	0.00	3.82	14.9	3.856
14.467	2.070	16.25	0.00	3.82	14.9	3.858
14.483	2.070	16.26	0.00	3.82	14.9	3.860
14.500	2.070	16.28	0.00	3.82	14.9	3.862
14.517	2.070	16.29	0.00	3.83	14.9	3.864
14.533	2.070	16.31	0.00	3.83	14.9	3.866
14.550	2.070	16.33	0.00	3.83	14.9	3.868
14.567	2.070	16.34	0.00	3.83	15.0	3.869
14.583	2.070	16.36	0.00	3.83	15.0	3.871
14.600	2.070	16.37	0.00	3.83	15.0	3.873
14.617	2.070	16.39	0.00	3.83	15.0	3.875
14.633	2.070	16.40	0.00	3.83	15.0	3.877
14.650	2.070	16.42	0.00	3.84	15.0	3.879
14.667	2.070	16.44	0.00	3.84	15.0	3.881
14.683	2.070	16.45	0.00	3.84	15.1	3.883
14.700	2.070	16.47	0.00	3.84	15.1	3.885
14.717	2.070	16.48	0.00	3.84	15.1	3.887
14.733	2.070	16.50	0.00	3.84	15.1	3.889
14.750	2.070	16.52	0.00	3.84	15.1	3.891
14.767	2.070	16.53	0.00	3.84	15.1	3.893
14.783	2.070	16.57	0.00	3.85	15.1	3.895
14.800	2.070	16.62	0.00	3.85	15.2	3.897
14.817	2.070	16.66	0.00	3.85	15.2	3.899
14.833	2.070	16.70	0.00	3.85	15.2	3.901
14.850	2.070	16.75	0.00	3.85	15.2	3.903
14.867	2.070	16.79	0.00	3.85	15.2	3.905
14.883	2.070	16.84	0.00	3.85	15.2	3.907
14.900	2.070	16.88	0.00	3.86	15.2	3.910

14.917	2.070	16.92	0.00	3.86	15.3	3.912
14.933	2.070	16.97	0.00	3.86	15.3	3.914
14.950	2.070	17.01	0.00	3.86	15.3	3.916
14.967	2.070	17.06	0.00	3.86	15.3	3.919
14.983	2.070	17.10	0.00	3.86	15.3	3.921
15.000	2.070	17.14	0.00	3.87	15.4	3.924
15.017	2.070	17.19	0.00	3.87	15.4	3.926
15.033	2.070	17.23	0.00	3.87	15.4	3.929
15.050	2.070	17.28	0.00	3.87	15.4	3.931
15.067	2.070	17.32	0.00	3.87	15.4	3.934
15.083	2.070	17.36	0.00	3.87	15.4	3.937
15.100	2.070	17.39	0.00	3.88	15.5	3.939
15.117	2.070	17.43	0.00	3.88	15.5	3.942
15.133	2.070	17.46	0.00	3.88	15.5	3.945
15.150	2.070	17.49	0.00	3.88	15.5	3.947
15.167	2.070	17.52	0.00	3.88	15.5	3.950
15.183	2.070	17.56	0.00	3.88	15.6	3.953
15.200	2.070	17.59	0.00	3.89	15.6	3.956
15.217	2.070	17.62	0.00	3.89	15.6	3.958
15.233	2.070	17.65	0.00	3.89	15.6	3.961
15.250	2.070	17.69	0.00	3.89	15.6	3.964
15.267	2.070	17.72	0.00	3.89	15.7	3.967
15.283	2.070	17.75	0.00	3.90	15.7	3.970
15.300	2.070	17.78	0.00	3.90	15.7	3.973
15.317	2.070	17.82	0.00	3.90	15.7	3.975
15.333	2.070	17.85	0.00	3.90	15.8	3.978
15.350	2.070	17.88	0.00	3.90	15.8	3.981
15.367	2.070	17.91	0.00	3.90	15.8	3.984
15.383	2.070	17.95	0.00	3.91	15.8	3.987
15.400	2.070	18.01	0.00	3.91	15.8	3.990
15.417	2.070	18.08	0.00	3.91	15.9	3.993
15.433	2.070	18.15	0.00	3.91	15.9	3.996
15.450	2.070	18.23	0.00	3.91	15.9	3.999
15.467	2.070	18.30	0.00	3.92	15.9	4.003
15.483	2.070	18.37	0.00	3.92	16.0	4.006
15.500	2.070	18.44	0.00	3.92	16.0	4.009
15.517	2.070	18.52	0.00	3.92	16.0	4.013
15.533	2.070	18.59	0.00	3.93	16.0	4.016
15.550	2.070	18.66	0.00	3.93	16.1	4.020
15.567	2.070	18.73	0.00	3.93	16.1	4.024
15.583	2.070	18.81	0.00	3.93	16.1	4.027
15.600	2.070	18.88	0.00	3.94	16.1	4.031
15.617	2.070	18.95	0.00	3.94	16.2	4.035
15.633	2.070	19.03	0.00	3.94	16.2	4.039
15.650	2.070	19.10	0.00	3.94	16.2	4.043
15.667	2.070	19.17	0.00	3.95	16.3	4.047
15.683	2.070	19.25	0.00	3.95	16.3	4.051
15.700	2.070	19.34	0.00	3.95	16.3	4.055
15.717	2.070	19.50	0.00	3.95	16.3	4.059
15.733	2.070	19.68	0.00	3.96	16.4	4.064
15.750	2.070	19.85	0.00	3.96	16.4	4.069
15.767	2.070	20.02	0.00	3.96	16.4	4.074
15.783	2.070	20.20	0.00	3.97	16.5	4.079
15.800	2.070	20.37	0.00	3.97	16.5	4.084
15.817	2.070	20.54	0.00	3.97	16.6	4.090
15.833	2.070	20.72	0.00	3.98	16.6	4.095
15.850	2.070	20.89	0.00	3.98	16.6	4.101
15.867	2.070	21.06	0.00	3.99	16.7	4.107

15.883	2.070	21.24	0.00	3.99	16.7	4.113
15.900	2.070	21.41	0.00	3.99	16.8	4.120
15.917	2.070	21.58	0.00	4.00	16.8	4.126
15.933	2.070	21.76	0.00	4.00	16.9	4.133
15.950	2.070	21.93	0.00	4.01	16.9	4.140
15.967	2.070	22.10	0.00	4.01	16.9	4.147
15.983	2.070	22.28	0.00	4.01	17.0	4.154
16.000	2.070	22.45	0.00	4.02	17.0	4.162
16.017	2.070	23.19	0.00	4.02	17.0	4.170
16.033	2.070	24.48	0.00	4.03	17.1	4.181
16.050	2.070	25.78	0.00	4.04	17.1	4.192
16.067	2.070	27.08	0.00	4.05	17.2	4.206
16.083	2.070	28.38	0.00	4.06	17.2	4.222
16.100	2.070	29.68	0.00	4.07	17.3	4.239
16.117	2.070	30.98	0.00	4.08	17.3	4.257
16.133	2.070	32.28	0.00	4.09	17.4	4.278
16.150	2.070	33.57	0.00	4.10	17.5	4.300
16.167	2.070	34.87	0.00	4.12	17.6	4.324
16.183	2.070	36.17	0.00	4.13	17.7	4.349
16.200	2.070	37.47	0.00	4.15	17.8	4.376
16.217	2.070	38.77	0.00	4.17	17.9	4.405
16.233	2.070	40.06	0.00	4.18	18.0	4.435
16.250	2.070	41.36	0.00	4.20	18.2	4.467
16.267	2.070	42.66	0.00	4.22	18.3	4.501
16.283	2.070	43.96	0.00	4.24	18.4	4.536
16.300	2.070	45.26	0.00	4.27	18.6	4.573
16.317	2.070	46.68	0.00	4.29	18.7	4.611
16.333	2.070	45.33	0.00	4.31	18.9	4.648
16.350	2.070	43.82	0.00	4.33	19.0	4.682
16.367	2.070	42.31	0.00	4.35	19.1	4.714
16.383	2.070	40.80	0.00	4.37	19.3	4.744
16.400	2.070	39.29	0.00	4.39	19.4	4.771
16.417	2.070	37.78	0.00	4.40	19.5	4.796
16.433	2.070	36.27	0.00	4.42	19.6	4.819
16.450	2.070	34.76	0.00	4.43	19.7	4.840
16.467	2.070	33.26	0.00	4.44	19.7	4.859
16.483	2.070	31.75	0.00	4.45	19.8	4.875
16.500	2.070	30.24	0.00	4.46	19.9	4.889
16.517	2.070	28.73	0.00	4.46	19.9	4.901
16.533	2.070	27.22	0.00	4.47	20.0	4.911
16.550	2.070	25.71	0.00	4.48	20.0	4.919
16.567	2.070	24.20	0.00	4.48	20.0	4.925
16.583	2.070	22.69	0.00	4.48	20.0	4.929
16.600	2.070	21.18	0.00	4.48	20.1	4.930
16.617	2.070	19.67	0.00	4.48	20.1	4.930
16.633	2.070	18.62	0.00	4.48	20.1	4.928
16.650	2.070	18.49	0.00	4.48	20.0	4.926
16.667	2.070	18.40	0.00	4.48	20.0	4.923
16.683	2.070	18.31	0.00	4.48	20.0	4.921
16.700	2.070	18.22	0.00	4.47	20.0	4.918
16.717	2.070	18.12	0.00	4.47	20.0	4.916
16.733	2.070	18.03	0.00	4.47	20.0	4.913
16.750	2.070	17.94	0.00	4.47	20.0	4.910
16.767	2.070	17.85	0.00	4.47	20.0	4.907
16.783	2.070	17.75	0.00	4.47	20.0	4.904
16.800	2.070	17.66	0.00	4.46	20.0	4.901
16.817	2.070	17.57	0.00	4.46	19.9	4.898
16.833	2.070	17.48	0.00	4.46	19.9	4.895

16.850	2.070	17.38	0.00	4.46	19.9	4.891
16.867	2.070	17.29	0.00	4.46	19.9	4.888
16.883	2.070	17.20	0.00	4.45	19.9	4.884
16.900	2.070	17.11	0.00	4.45	19.9	4.880
16.917	2.070	17.01	0.00	4.45	19.9	4.876
16.933	2.070	16.92	0.00	4.45	19.8	4.872
16.950	2.070	16.86	0.00	4.44	19.8	4.868
16.967	2.070	16.81	0.00	4.44	19.8	4.864
16.983	2.070	16.76	0.00	4.44	19.8	4.860
17.000	2.070	16.71	0.00	4.44	19.8	4.855
17.017	2.070	16.66	0.00	4.43	19.8	4.851
17.033	2.070	16.62	0.00	4.43	19.7	4.847
17.050	2.070	16.57	0.00	4.43	19.7	4.843
17.067	2.070	16.52	0.00	4.43	19.7	4.838
17.083	2.070	16.47	0.00	4.42	19.7	4.834
17.100	2.070	16.42	0.00	4.42	19.7	4.829
17.117	2.070	16.37	0.00	4.42	19.7	4.825
17.133	2.070	16.32	0.00	4.42	19.6	4.820
17.150	2.070	16.27	0.00	4.41	19.6	4.816
17.167	2.070	16.23	0.00	4.41	19.6	4.811
17.183	2.070	16.18	0.00	4.41	19.6	4.806
17.200	2.070	16.13	0.00	4.40	19.6	4.802
17.217	2.070	16.08	0.00	4.40	19.5	4.797
17.233	2.070	16.03	0.00	4.40	19.5	4.792
17.250	2.070	15.99	0.00	4.40	19.5	4.787
17.267	2.070	15.95	0.00	4.39	19.5	4.782
17.283	2.070	15.92	0.00	4.39	19.5	4.777
17.300	2.070	15.89	0.00	4.39	19.4	4.773
17.317	2.070	15.86	0.00	4.38	19.4	4.768
17.333	2.070	15.83	0.00	4.38	19.4	4.763
17.350	2.070	15.80	0.00	4.38	19.4	4.758
17.367	2.070	15.77	0.00	4.38	19.4	4.753
17.383	2.070	15.74	0.00	4.37	19.3	4.748
17.400	2.070	15.71	0.00	4.37	19.3	4.743
17.417	2.070	15.68	0.00	4.37	19.3	4.738
17.433	2.070	15.65	0.00	4.36	19.3	4.733
17.450	2.070	15.62	0.00	4.36	19.3	4.728
17.467	2.070	15.59	0.00	4.36	19.2	4.723
17.483	2.070	15.56	0.00	4.35	19.2	4.718
17.500	2.070	15.53	0.00	4.35	19.2	4.713
17.517	2.070	15.50	0.00	4.35	19.2	4.708
17.533	2.070	15.47	0.00	4.34	19.2	4.703
17.550	2.070	15.44	0.00	4.34	19.1	4.697
17.567	2.070	15.42	0.00	4.34	19.1	4.692
17.583	2.070	15.40	0.00	4.34	19.1	4.687
17.600	2.070	15.38	0.00	4.33	19.1	4.682
17.617	2.070	15.36	0.00	4.33	19.1	4.677
17.633	2.070	15.34	0.00	4.33	19.0	4.672
17.650	2.070	15.32	0.00	4.32	19.0	4.667
17.667	2.070	15.30	0.00	4.32	19.0	4.662
17.683	2.070	15.28	0.00	4.32	19.0	4.657
17.700	2.070	15.26	0.00	4.31	19.0	4.651
17.717	2.070	15.24	0.00	4.31	18.9	4.646
17.733	2.070	15.22	0.00	4.31	18.9	4.641
17.750	2.070	15.20	0.00	4.30	18.9	4.636
17.767	2.070	15.18	0.00	4.30	18.9	4.631
17.783	2.070	15.16	0.00	4.30	18.9	4.626
17.800	2.070	15.14	0.00	4.30	18.8	4.621

17.817	2.070	15.11	0.00	4.29	18.8	4.616
17.833	2.070	15.09	0.00	4.29	18.8	4.611
17.850	2.070	15.07	0.00	4.29	18.8	4.606
17.867	2.070	15.05	0.00	4.28	18.8	4.600
17.883	2.070	15.04	0.00	4.28	18.7	4.595
17.900	2.070	15.02	0.00	4.28	18.7	4.590
17.917	2.070	15.01	0.00	4.27	18.7	4.585
17.933	2.070	14.99	0.00	4.27	18.7	4.580
17.950	2.070	14.98	0.00	4.27	18.7	4.575
17.967	2.070	14.96	0.00	4.27	18.6	4.570
17.983	2.070	14.95	0.00	4.26	18.6	4.565
18.000	2.070	14.93	0.00	4.26	18.6	4.560
18.017	2.070	14.92	0.00	4.26	18.6	4.555
18.033	2.070	14.90	0.00	4.25	18.6	4.550
18.050	2.070	14.89	0.00	4.25	18.5	4.545
18.067	2.070	14.87	0.00	4.25	18.5	4.540
18.083	2.070	14.86	0.00	4.24	18.5	4.535
18.100	2.070	14.84	0.00	4.24	18.5	4.530
18.117	2.070	14.83	0.00	4.24	18.5	4.525
18.133	2.070	14.82	0.00	4.23	18.4	4.520
18.150	2.070	14.80	0.00	4.23	18.4	4.515
18.167	2.070	14.79	0.00	4.23	18.4	4.510
18.183	2.070	14.76	0.00	4.23	18.4	4.505
18.200	2.070	14.72	0.00	4.22	18.4	4.500
18.217	2.070	14.68	0.00	4.22	18.3	4.495
18.233	2.070	14.64	0.00	4.22	18.3	4.490
18.250	2.070	14.60	0.00	4.21	18.3	4.485
18.267	2.070	14.56	0.00	4.21	18.3	4.479
18.283	2.070	14.52	0.00	4.21	18.3	4.474
18.300	2.070	14.47	0.00	4.20	18.2	4.469
18.317	2.070	14.43	0.00	4.20	18.2	4.464
18.333	2.070	14.39	0.00	4.20	18.2	4.459
18.350	2.070	14.35	0.00	4.19	18.2	4.453
18.367	2.070	14.31	0.00	4.19	18.2	4.448
18.383	2.070	14.27	0.00	4.19	18.1	4.443
18.400	2.070	14.23	0.00	4.19	18.1	4.437
18.417	2.070	14.19	0.00	4.18	18.1	4.432
18.433	2.070	14.15	0.00	4.18	18.1	4.427
18.450	2.070	14.10	0.00	4.18	18.0	4.421
18.467	2.070	14.06	0.00	4.17	18.0	4.416
18.483	2.070	14.02	0.00	4.17	18.0	4.410
18.500	2.070	14.00	0.00	4.17	18.0	4.405
18.517	2.070	14.00	0.00	4.16	18.0	4.399
18.533	2.070	13.99	0.00	4.16	17.9	4.394
18.550	2.070	13.98	0.00	4.16	17.9	4.388
18.567	2.070	13.97	0.00	4.15	17.9	4.383
18.583	2.070	13.96	0.00	4.15	17.9	4.378
18.600	2.070	13.95	0.00	4.15	17.9	4.372
18.617	2.070	13.94	0.00	4.14	17.8	4.367
18.633	2.070	13.93	0.00	4.14	17.8	4.362
18.650	2.070	13.93	0.00	4.14	17.8	4.356
18.667	2.070	13.92	0.00	4.13	17.8	4.351
18.683	2.070	13.91	0.00	4.13	17.7	4.346
18.700	2.070	13.90	0.00	4.13	17.7	4.340
18.717	2.070	13.89	0.00	4.12	17.7	4.335
18.733	2.070	13.88	0.00	4.12	17.7	4.330
18.750	2.070	13.87	0.00	4.12	17.7	4.325
18.767	2.070	13.87	0.00	4.11	17.6	4.319

18.783	2.070	13.86	0.00	4.11	17.6	4.314
18.800	2.070	13.85	0.00	4.11	17.6	4.309
18.817	2.070	13.84	0.00	4.10	17.6	4.304
18.833	2.070	13.83	0.00	4.10	17.6	4.299
18.850	2.070	13.83	0.00	4.10	17.5	4.294
18.867	2.070	13.82	0.00	4.10	17.5	4.289
18.883	2.070	13.81	0.00	4.09	17.5	4.283
18.900	2.070	13.81	0.00	4.09	17.5	4.278
18.917	2.070	13.80	0.00	4.09	17.5	4.273
18.933	2.070	13.79	0.00	4.08	17.4	4.268
18.950	2.070	13.78	0.00	4.08	17.4	4.263
18.967	2.070	13.78	0.00	4.08	17.4	4.258
18.983	2.070	13.77	0.00	4.07	17.4	4.253
19.000	2.070	13.76	0.00	4.07	17.4	4.248
19.017	2.070	13.76	0.00	4.07	17.3	4.244
19.033	2.070	13.75	0.00	4.07	17.3	4.239
19.050	2.070	13.74	0.00	4.06	17.3	4.234
19.067	2.070	13.74	0.00	4.06	17.3	4.229
19.083	2.070	13.73	0.00	4.06	17.3	4.224
19.100	2.070	13.72	0.00	4.05	17.2	4.219
19.117	2.070	13.71	0.00	4.05	17.2	4.214
19.133	2.070	13.71	0.00	4.05	17.2	4.209
19.150	2.070	13.70	0.00	4.04	17.2	4.205
19.167	2.070	13.70	0.00	4.04	17.2	4.200
19.183	2.070	13.69	0.00	4.04	17.1	4.195
19.200	2.070	13.68	0.00	4.04	17.1	4.190
19.217	2.070	13.68	0.00	4.03	17.1	4.186
19.233	2.070	13.67	0.00	4.03	17.1	4.181
19.250	2.070	13.67	0.00	4.03	17.1	4.176
19.267	2.070	13.66	0.00	4.03	17.1	4.172
19.283	2.070	13.66	0.00	4.02	17.0	4.167
19.300	2.070	13.65	0.00	4.02	17.0	4.162
19.317	2.070	13.64	0.00	4.02	17.0	4.158
19.333	2.070	13.64	0.00	4.01	17.0	4.153
19.350	2.070	13.63	0.00	4.01	17.0	4.148
19.367	2.070	13.63	0.00	4.01	16.9	4.144
19.383	2.070	13.62	0.00	4.01	16.9	4.139
19.400	2.070	13.61	0.00	4.00	16.9	4.135
19.417	2.070	13.61	0.00	4.00	16.9	4.130
19.433	2.070	13.60	0.00	4.00	16.9	4.126
19.450	2.070	13.60	0.00	3.99	16.8	4.121
19.467	2.070	13.59	0.00	3.99	16.8	4.117
19.483	2.070	13.57	0.00	3.99	16.8	4.112
19.500	2.070	13.53	0.00	3.99	16.7	4.108
19.517	2.070	13.48	0.00	3.98	16.7	4.104
19.533	2.070	13.44	0.00	3.98	16.7	4.099
19.550	2.070	13.40	0.00	3.98	16.6	4.095
19.567	2.070	13.36	0.00	3.97	16.6	4.090
19.583	2.070	13.31	0.00	3.97	16.6	4.086
19.600	2.070	13.27	0.00	3.97	16.5	4.081
19.617	2.070	13.23	0.00	3.97	16.5	4.077
19.633	2.070	13.19	0.00	3.96	16.5	4.072
19.650	2.070	13.15	0.00	3.96	16.4	4.068
19.667	2.070	13.10	0.00	3.96	16.4	4.063
19.683	2.070	13.06	0.00	3.95	16.4	4.059
19.700	2.070	13.02	0.00	3.95	16.3	4.054
19.717	2.070	12.98	0.00	3.95	16.3	4.049
19.733	2.070	12.94	0.00	3.94	16.3	4.045

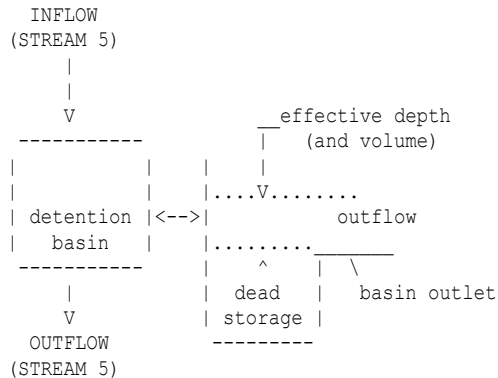
19.750	2.070	12.90	0.00	3.94	16.2	4.040
19.767	2.070	12.86	0.00	3.94	16.2	4.036
19.783	2.070	12.83	0.00	3.94	16.2	4.031
19.800	2.070	12.79	0.00	3.93	16.1	4.026
19.817	2.070	12.75	0.00	3.93	16.1	4.022
19.833	2.070	12.72	0.00	3.93	16.1	4.017
19.850	2.070	12.68	0.00	3.92	16.0	4.013
19.867	2.070	12.64	0.00	3.92	16.0	4.008
19.883	2.070	12.61	0.00	3.92	16.0	4.003
19.900	2.070	12.57	0.00	3.91	15.9	3.999
19.917	2.070	12.53	0.00	3.91	15.9	3.994
19.933	2.070	12.50	0.00	3.91	15.9	3.989
19.950	2.070	12.46	0.00	3.91	15.8	3.985
19.967	2.070	12.43	0.00	3.90	15.8	3.980
19.983	2.070	12.39	0.00	3.90	15.8	3.976
20.000	2.070	12.35	0.00	3.90	15.7	3.971

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 24.951 AF
 BASIN STORAGE = 2.317 AF (WITH 0.000 AF INITIALLY FILLED)
 OUTFLOW VOLUME = 22.634 AF
 LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
 THROUGH A FLOW-THROUGH DETENTION BASIN
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	1.84	0.260
3	2.00	3.22	1.160
4	3.00	4.16	2.520
5	4.00	4.94	3.990
6	5.00	5.60	5.550
7	6.00	7.17	7.200
8	7.00	14.13	8.950
9	8.00	18.54	10.800
10	9.00	21.90	12.740
11	10.00	24.73	14.780
12	11.00	37.17	16.920
13	12.00	57.63	19.160
14	13.00	83.32	21.500
15	14.00	112.96	23.940
16	15.00	133.28	26.480
17	16.00	144.34	29.150
18	17.00	154.45	31.950
19	18.00	163.94	34.870
20	19.00	172.92	37.940
21	20.00	181.39	41.140
22	21.00	189.45	44.500
23	22.00	197.22	48.010
24	23.00	466.70	51.740
25	24.00	951.81	53.820

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(1-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	MEAN EFFECTIVE DEPTH (FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME (AF)
10.000	0.000	11.78	0.00	3.98	4.9	3.956
10.017	0.000	11.84	0.00	3.98	4.9	3.966
10.033	0.000	11.89	0.00	3.99	4.9	3.975
10.050	0.000	11.94	0.00	4.00	4.9	3.985
10.067	0.000	11.99	0.00	4.00	4.9	3.995
10.083	0.000	12.04	0.00	4.01	4.9	4.004
10.100	0.000	12.10	0.00	4.02	4.9	4.014
10.117	0.000	12.15	0.00	4.02	5.0	4.024
10.133	0.000	12.18	0.00	4.03	5.0	4.034
10.150	0.000	12.21	0.00	4.03	5.0	4.044
10.167	0.000	12.24	0.00	4.04	5.0	4.054
10.183	0.000	12.26	0.00	4.05	5.0	4.064
10.200	0.000	12.29	0.00	4.05	5.0	4.074
10.217	0.000	12.32	0.00	4.06	5.0	4.084
10.233	0.000	12.35	0.00	4.07	5.0	4.095
10.250	0.000	12.38	0.00	4.07	5.0	4.105
10.267	0.000	12.41	0.00	4.08	5.0	4.115
10.283	0.000	12.44	0.00	4.09	5.0	4.125
10.300	0.000	12.46	0.00	4.09	5.0	4.135

10.317	0.000	12.49	0.00	4.10	5.0	4.146
10.333	0.000	12.52	0.00	4.11	5.0	4.156
10.350	0.000	12.55	0.00	4.11	5.0	4.166
10.367	0.000	12.58	0.00	4.12	5.0	4.177
10.383	0.000	12.61	0.00	4.13	5.0	4.187
10.400	0.000	12.63	0.00	4.13	5.0	4.198
10.417	0.000	12.66	0.00	4.14	5.0	4.208
10.433	0.000	12.70	0.00	4.15	5.0	4.219
10.450	0.000	12.76	0.00	4.15	5.0	4.230
10.467	0.000	12.82	0.00	4.16	5.0	4.240
10.483	0.000	12.89	0.00	4.17	5.0	4.251
10.500	0.000	12.95	0.00	4.17	5.1	4.262
10.517	0.000	13.01	0.00	4.18	5.1	4.273
10.533	0.000	13.07	0.00	4.19	5.1	4.284
10.550	0.000	13.13	0.00	4.20	5.1	4.295
10.567	0.000	13.20	0.00	4.20	5.1	4.306
10.583	0.000	13.26	0.00	4.21	5.1	4.317
10.600	0.000	13.32	0.00	4.22	5.1	4.329
10.617	0.000	13.38	0.00	4.22	5.1	4.340
10.633	0.000	13.44	0.00	4.23	5.1	4.352
10.650	0.000	13.51	0.00	4.24	5.1	4.363
10.667	0.000	13.57	0.00	4.25	5.1	4.375
10.683	0.000	13.63	0.00	4.25	5.1	4.387
10.700	0.000	13.69	0.00	4.26	5.1	4.399
10.717	0.000	13.75	0.00	4.27	5.1	4.410
10.733	0.000	13.81	0.00	4.28	5.1	4.422
10.750	0.000	13.86	0.00	4.28	5.1	4.434
10.767	0.000	13.89	0.00	4.29	5.1	4.447
10.783	0.000	13.93	0.00	4.30	5.1	4.459
10.800	0.000	13.96	0.00	4.31	5.1	4.471
10.817	0.000	13.99	0.00	4.32	5.1	4.483
10.833	0.000	14.03	0.00	4.32	5.2	4.495
10.850	0.000	14.06	0.00	4.33	5.2	4.507
10.867	0.000	14.10	0.00	4.34	5.2	4.520
10.883	0.000	14.13	0.00	4.35	5.2	4.532
10.900	0.000	14.16	0.00	4.36	5.2	4.545
10.917	0.000	14.20	0.00	4.36	5.2	4.557
10.933	0.000	14.23	0.00	4.37	5.2	4.569
10.950	0.000	14.26	0.00	4.38	5.2	4.582
10.967	0.000	14.30	0.00	4.39	5.2	4.594
10.983	0.000	14.33	0.00	4.40	5.2	4.607
11.000	0.000	14.37	0.00	4.40	5.2	4.620
11.017	0.000	14.40	0.00	4.41	5.2	4.632
11.033	0.000	14.43	0.00	4.42	5.2	4.645
11.050	0.000	14.48	0.00	4.43	5.2	4.658
11.067	0.000	14.55	0.00	4.44	5.2	4.671
11.083	0.000	14.62	0.00	4.44	5.2	4.684
11.100	0.000	14.70	0.00	4.45	5.2	4.697
11.117	0.000	14.77	0.00	4.46	5.2	4.710
11.133	0.000	14.85	0.00	4.47	5.2	4.723
11.150	0.000	14.92	0.00	4.48	5.3	4.736
11.167	0.000	15.00	0.00	4.49	5.3	4.750
11.183	0.000	15.07	0.00	4.50	5.3	4.763
11.200	0.000	15.15	0.00	4.50	5.3	4.777
11.217	0.000	15.22	0.00	4.51	5.3	4.790
11.233	0.000	15.29	0.00	4.52	5.3	4.804
11.250	0.000	15.37	0.00	4.53	5.3	4.818
11.267	0.000	15.44	0.00	4.54	5.3	4.832

11.283	0.000	15.52	0.00	4.55	5.3	4.846
11.300	0.000	15.59	0.00	4.56	5.3	4.860
11.317	0.000	15.67	0.00	4.57	5.3	4.875
11.333	0.000	15.74	0.00	4.58	5.3	4.889
11.350	0.000	15.82	0.00	4.59	5.3	4.903
11.367	0.000	15.88	0.00	4.59	5.3	4.918
11.383	0.000	15.92	0.00	4.60	5.3	4.933
11.400	0.000	15.96	0.00	4.61	5.3	4.947
11.417	0.000	16.00	0.00	4.62	5.3	4.962
11.433	0.000	16.04	0.00	4.63	5.4	4.977
11.450	0.000	16.08	0.00	4.64	5.4	4.991
11.467	0.000	16.12	0.00	4.65	5.4	5.006
11.483	0.000	16.17	0.00	4.66	5.4	5.021
11.500	0.000	16.21	0.00	4.67	5.4	5.036
11.517	0.000	16.25	0.00	4.68	5.4	5.051
11.533	0.000	16.29	0.00	4.69	5.4	5.066
11.550	0.000	16.33	0.00	4.70	5.4	5.081
11.567	0.000	16.37	0.00	4.71	5.4	5.096
11.583	0.000	16.41	0.00	4.72	5.4	5.111
11.600	0.000	16.46	0.00	4.73	5.4	5.126
11.617	0.000	16.50	0.00	4.74	5.4	5.142
11.633	0.000	16.54	0.00	4.75	5.4	5.157
11.650	0.000	16.58	0.00	4.76	5.4	5.172
11.667	0.000	16.63	0.00	4.77	5.4	5.188
11.683	0.000	16.71	0.00	4.78	5.5	5.203
11.700	0.000	16.80	0.00	4.79	5.5	5.219
11.717	0.000	16.89	0.00	4.80	5.5	5.235
11.733	0.000	16.99	0.00	4.81	5.5	5.250
11.750	0.000	17.08	0.00	4.82	5.5	5.266
11.767	0.000	17.17	0.00	4.83	5.5	5.283
11.783	0.000	17.26	0.00	4.84	5.5	5.299
11.800	0.000	17.36	0.00	4.85	5.5	5.315
11.817	0.000	17.45	0.00	4.86	5.5	5.332
11.833	0.000	17.54	0.00	4.87	5.5	5.348
11.850	0.000	17.63	0.00	4.88	5.5	5.365
11.867	0.000	17.73	0.00	4.89	5.5	5.382
11.883	0.000	17.82	0.00	4.90	5.5	5.399
11.900	0.000	17.91	0.00	4.91	5.5	5.416
11.917	0.000	18.00	0.00	4.92	5.5	5.433
11.933	0.000	18.10	0.00	4.94	5.6	5.450
11.950	0.000	18.19	0.00	4.95	5.6	5.467
11.967	0.000	18.28	0.00	4.96	5.6	5.485
11.983	0.000	18.41	0.00	4.97	5.6	5.503
12.000	0.000	18.61	0.00	4.98	5.6	5.521
12.017	0.000	18.82	0.00	4.99	5.6	5.539
12.033	0.000	19.02	0.00	5.00	5.6	5.557
12.050	0.000	19.23	0.00	5.02	5.6	5.576
12.067	0.000	19.43	0.00	5.03	5.6	5.595
12.083	0.000	19.64	0.00	5.04	5.7	5.614
12.100	0.000	19.85	0.00	5.05	5.7	5.634
12.117	0.000	20.05	0.00	5.06	5.7	5.654
12.133	0.000	20.26	0.00	5.07	5.7	5.674
12.150	0.000	20.46	0.00	5.09	5.7	5.694
12.167	0.000	20.67	0.00	5.10	5.7	5.714
12.183	0.000	20.87	0.00	5.11	5.8	5.735
12.200	0.000	21.08	0.00	5.13	5.8	5.756
12.217	0.000	21.28	0.00	5.14	5.8	5.778
12.233	0.000	21.49	0.00	5.15	5.8	5.799

12.250	0.000	21.69	0.00	5.16	5.8	5.821
12.267	0.000	21.90	0.00	5.18	5.9	5.843
12.283	0.000	22.11	0.00	5.19	5.9	5.866
12.300	0.000	22.45	0.00	5.21	5.9	5.888
12.317	0.000	22.85	0.00	5.22	5.9	5.912
12.333	0.000	23.26	0.00	5.23	6.0	5.935
12.350	0.000	23.66	0.00	5.25	6.0	5.960
12.367	0.000	24.06	0.00	5.26	6.0	5.985
12.383	0.000	24.47	0.00	5.28	6.0	6.010
12.400	0.000	24.87	0.00	5.29	6.1	6.036
12.417	0.000	25.27	0.00	5.31	6.1	6.062
12.433	0.000	25.67	0.00	5.33	6.1	6.089
12.450	0.000	26.08	0.00	5.34	6.1	6.117
12.467	0.000	26.48	0.00	5.36	6.2	6.145
12.483	0.000	26.88	0.00	5.38	6.2	6.173
12.500	0.000	27.29	0.00	5.40	6.2	6.202
12.517	0.000	27.69	0.00	5.41	6.2	6.232
12.533	0.000	28.09	0.00	5.43	6.3	6.262
12.550	0.000	28.50	0.00	5.45	6.3	6.293
12.567	0.000	28.90	0.00	5.47	6.3	6.324
12.583	0.000	29.30	0.00	5.49	6.4	6.355
12.600	0.000	29.65	0.00	5.51	6.4	6.387
12.617	0.000	29.74	0.00	5.53	6.4	6.420
12.633	0.000	29.82	0.00	5.55	6.4	6.452
12.650	0.000	29.89	0.00	5.57	6.5	6.484
12.667	0.000	29.96	0.00	5.59	6.5	6.516
12.683	0.000	30.03	0.00	5.61	6.5	6.549
12.700	0.000	30.10	0.00	5.62	6.6	6.581
12.717	0.000	30.17	0.00	5.64	6.6	6.614
12.733	0.000	30.24	0.00	5.66	6.6	6.646
12.750	0.000	30.32	0.00	5.68	6.7	6.679
12.767	0.000	30.39	0.00	5.70	6.7	6.711
12.783	0.000	30.46	0.00	5.72	6.7	6.744
12.800	0.000	30.53	0.00	5.74	6.8	6.777
12.817	0.000	30.60	0.00	5.76	6.8	6.810
12.833	0.000	30.67	0.00	5.78	6.8	6.842
12.850	0.000	30.74	0.00	5.80	6.8	6.875
12.867	0.000	30.81	0.00	5.82	6.9	6.908
12.883	0.000	30.89	0.00	5.84	6.9	6.941
12.900	0.000	30.96	0.00	5.86	6.9	6.974
12.917	0.000	31.07	0.00	5.88	7.0	7.008
12.933	0.000	31.24	0.00	5.90	7.0	7.041
12.950	0.000	31.40	0.00	5.92	7.0	7.075
12.967	0.000	31.57	0.00	5.94	7.1	7.108
12.983	0.000	31.73	0.00	5.96	7.1	7.142
13.000	0.000	31.90	0.00	5.99	7.1	7.176
13.017	0.000	32.06	0.00	6.01	7.2	7.211
13.033	0.000	32.23	0.00	6.03	7.3	7.245
13.050	0.000	32.39	0.00	6.05	7.4	7.279
13.067	0.000	32.56	0.00	6.07	7.6	7.314
13.083	0.000	32.72	0.00	6.08	7.7	7.348
13.100	0.000	32.88	0.00	6.10	7.8	7.383
13.117	0.000	33.05	0.00	6.12	8.0	7.417
13.133	0.000	33.21	0.00	6.14	8.1	7.452
13.150	0.000	33.38	0.00	6.16	8.2	7.487
13.167	0.000	33.54	0.00	6.18	8.4	7.521
13.183	0.000	33.71	0.00	6.20	8.5	7.556
13.200	0.000	33.87	0.00	6.22	8.7	7.591

13.217	0.000	34.03	0.00	6.24	8.8	7.625
13.233	0.000	34.14	0.00	6.26	8.9	7.660
13.250	0.000	34.24	0.00	6.28	9.1	7.695
13.267	0.000	34.33	0.00	6.30	9.2	7.729
13.283	0.000	34.43	0.00	6.32	9.3	7.764
13.300	0.000	34.52	0.00	6.34	9.5	7.798
13.317	0.000	34.62	0.00	6.36	9.6	7.833
13.333	0.000	34.72	0.00	6.38	9.8	7.867
13.350	0.000	34.81	0.00	6.40	9.9	7.902
13.367	0.000	34.91	0.00	6.42	10.0	7.936
13.383	0.000	35.00	0.00	6.44	10.2	7.970
13.400	0.000	35.10	0.00	6.46	10.3	8.004
13.417	0.000	35.20	0.00	6.48	10.4	8.038
13.433	0.000	35.29	0.00	6.50	10.6	8.072
13.450	0.000	35.39	0.00	6.52	10.7	8.106
13.467	0.000	35.48	0.00	6.54	10.8	8.140
13.483	0.000	35.58	0.00	6.56	11.0	8.174
13.500	0.000	35.68	0.00	6.58	11.1	8.208
13.517	0.000	35.77	0.00	6.60	11.2	8.242
13.533	0.000	35.91	0.00	6.61	11.4	8.276
13.550	0.000	36.14	0.00	6.63	11.5	8.310
13.567	0.000	36.37	0.00	6.65	11.7	8.344
13.583	0.000	36.60	0.00	6.67	11.8	8.378
13.600	0.000	36.83	0.00	6.69	11.9	8.412
13.617	0.000	37.05	0.00	6.71	12.1	8.446
13.633	0.000	37.28	0.00	6.73	12.2	8.481
13.650	0.000	37.51	0.00	6.75	12.3	8.516
13.667	0.000	37.74	0.00	6.77	12.5	8.551
13.683	0.000	37.97	0.00	6.79	12.6	8.585
13.700	0.000	38.20	0.00	6.81	12.7	8.621
13.717	0.000	38.43	0.00	6.83	12.9	8.656
13.733	0.000	38.66	0.00	6.85	13.0	8.691
13.750	0.000	38.89	0.00	6.87	13.2	8.726
13.767	0.000	39.12	0.00	6.89	13.3	8.762
13.783	0.000	39.35	0.00	6.91	13.5	8.798
13.800	0.000	39.58	0.00	6.93	13.6	8.833
13.817	0.000	39.81	0.00	6.95	13.7	8.869
13.833	0.000	40.03	0.00	6.97	13.9	8.905
13.850	0.000	40.20	0.00	7.00	14.0	8.941
13.867	0.000	40.34	0.00	7.01	14.1	8.978
13.883	0.000	40.48	0.00	7.03	14.2	9.014
13.900	0.000	40.62	0.00	7.05	14.3	9.050
13.917	0.000	40.76	0.00	7.07	14.4	9.086
13.933	0.000	40.90	0.00	7.09	14.5	9.123
13.950	0.000	41.04	0.00	7.11	14.6	9.159
13.967	0.000	41.18	0.00	7.13	14.7	9.195
13.983	0.000	41.31	0.00	7.15	14.8	9.232
14.000	0.000	41.45	0.00	7.17	14.8	9.269
14.017	0.000	41.59	0.00	7.19	14.9	9.305
14.033	0.000	41.73	0.00	7.21	15.0	9.342
14.050	0.000	41.87	0.00	7.23	15.1	9.379
14.067	0.000	42.01	0.00	7.25	15.2	9.416
14.083	0.000	42.15	0.00	7.27	15.3	9.453
14.100	0.000	42.29	0.00	7.29	15.4	9.490
14.117	0.000	42.43	0.00	7.31	15.5	9.527
14.133	0.000	42.57	0.00	7.33	15.6	9.564
14.150	0.000	42.75	0.00	7.35	15.6	9.602
14.167	0.000	43.09	0.00	7.37	15.7	9.639

14.183	0.000	43.46	0.00	7.39	15.8	9.678
14.200	0.000	43.83	0.00	7.41	15.9	9.716
14.217	0.000	44.20	0.00	7.44	16.0	9.755
14.233	0.000	44.56	0.00	7.46	16.1	9.794
14.250	0.000	44.93	0.00	7.48	16.2	9.834
14.267	0.000	45.30	0.00	7.50	16.3	9.874
14.283	0.000	45.66	0.00	7.52	16.4	9.914
14.300	0.000	46.03	0.00	7.54	16.5	9.955
14.317	0.000	46.40	0.00	7.57	16.6	9.996
14.333	0.000	46.76	0.00	7.59	16.7	10.037
14.350	0.000	47.13	0.00	7.61	16.8	10.079
14.367	0.000	47.50	0.00	7.63	16.9	10.121
14.383	0.000	47.86	0.00	7.66	17.0	10.164
14.400	0.000	48.23	0.00	7.68	17.1	10.207
14.417	0.000	48.60	0.00	7.70	17.2	10.250
14.433	0.000	48.96	0.00	7.73	17.3	10.294
14.450	0.000	49.33	0.00	7.75	17.4	10.338
14.467	0.000	49.63	0.00	7.77	17.5	10.382
14.483	0.000	49.86	0.00	7.80	17.6	10.426
14.500	0.000	50.08	0.00	7.82	17.7	10.471
14.517	0.000	50.31	0.00	7.85	17.8	10.516
14.533	0.000	50.54	0.00	7.87	17.9	10.561
14.550	0.000	50.76	0.00	7.89	18.0	10.606
14.567	0.000	50.99	0.00	7.92	18.1	10.651
14.583	0.000	51.22	0.00	7.94	18.2	10.696
14.600	0.000	51.45	0.00	7.97	18.3	10.742
14.617	0.000	51.67	0.00	7.99	18.5	10.788
14.633	0.000	51.90	0.00	8.02	18.6	10.834
14.650	0.000	52.13	0.00	8.04	18.6	10.880
14.667	0.000	52.35	0.00	8.06	18.7	10.926
14.683	0.000	52.58	0.00	8.09	18.8	10.973
14.700	0.000	52.81	0.00	8.11	18.9	11.019
14.717	0.000	53.04	0.00	8.14	19.0	11.066
14.733	0.000	53.26	0.00	8.16	19.0	11.113
14.750	0.000	53.49	0.00	8.19	19.1	11.161
14.767	0.000	53.75	0.00	8.21	19.2	11.208
14.783	0.000	54.31	0.00	8.24	19.3	11.257
14.800	0.000	54.94	0.00	8.26	19.4	11.306
14.817	0.000	55.58	0.00	8.29	19.5	11.355
14.833	0.000	56.21	0.00	8.31	19.5	11.406
14.850	0.000	56.84	0.00	8.34	19.6	11.457
14.867	0.000	57.48	0.00	8.37	19.7	11.509
14.883	0.000	58.11	0.00	8.39	19.8	11.562
14.900	0.000	58.74	0.00	8.42	19.9	11.615
14.917	0.000	59.38	0.00	8.45	20.0	11.670
14.933	0.000	60.01	0.00	8.48	20.1	11.725
14.950	0.000	60.64	0.00	8.51	20.2	11.780
14.967	0.000	61.28	0.00	8.53	20.3	11.837
14.983	0.000	61.91	0.00	8.56	20.4	11.894
15.000	0.000	62.54	0.00	8.59	20.5	11.952
15.017	0.000	63.18	0.00	8.62	20.6	12.011
15.033	0.000	63.81	0.00	8.65	20.7	12.070
15.050	0.000	64.45	0.00	8.69	20.8	12.130
15.067	0.000	65.08	0.00	8.72	20.9	12.191
15.083	0.000	65.66	0.00	8.75	21.0	12.252
15.100	0.000	66.13	0.00	8.78	21.1	12.314
15.117	0.000	66.60	0.00	8.81	21.2	12.377
15.133	0.000	67.07	0.00	8.85	21.3	12.440

15.150	0.000	67.54	0.00	8.88	21.4	12.503
15.167	0.000	68.01	0.00	8.91	21.5	12.567
15.183	0.000	68.48	0.00	8.94	21.7	12.632
15.200	0.000	68.95	0.00	8.98	21.8	12.697
15.217	0.000	69.42	0.00	9.01	21.9	12.762
15.233	0.000	69.89	0.00	9.04	22.0	12.828
15.250	0.000	70.36	0.00	9.08	22.1	12.895
15.267	0.000	70.83	0.00	9.11	22.2	12.962
15.283	0.000	71.31	0.00	9.14	22.3	13.030
15.300	0.000	71.78	0.00	9.18	22.3	13.098
15.317	0.000	72.25	0.00	9.21	22.4	13.166
15.333	0.000	72.72	0.00	9.24	22.5	13.235
15.350	0.000	73.19	0.00	9.28	22.6	13.305
15.367	0.000	73.66	0.00	9.31	22.7	13.375
15.383	0.000	74.14	0.00	9.35	22.8	13.446
15.400	0.000	75.00	0.00	9.38	22.9	13.518
15.417	0.000	76.05	0.00	9.42	23.0	13.591
15.433	0.000	77.10	0.00	9.45	23.1	13.665
15.450	0.000	78.15	0.00	9.49	23.2	13.741
15.467	0.000	79.20	0.00	9.53	23.3	13.818
15.483	0.000	80.25	0.00	9.57	23.4	13.896
15.500	0.000	81.30	0.00	9.61	23.6	13.975
15.517	0.000	82.34	0.00	9.65	23.7	14.056
15.533	0.000	83.39	0.00	9.69	23.8	14.138
15.550	0.000	84.44	0.00	9.73	23.9	14.222
15.567	0.000	85.49	0.00	9.77	24.0	14.306
15.583	0.000	86.54	0.00	9.81	24.1	14.392
15.600	0.000	87.59	0.00	9.85	24.3	14.479
15.617	0.000	88.64	0.00	9.90	24.4	14.568
15.633	0.000	89.69	0.00	9.94	24.5	14.658
15.650	0.000	90.73	0.00	9.98	24.6	14.749
15.667	0.000	91.78	0.00	10.03	24.9	14.841
15.683	0.000	92.83	0.00	10.07	25.4	14.934
15.700	0.000	94.14	0.00	10.12	25.9	15.028
15.717	0.000	96.52	0.00	10.16	26.5	15.124
15.733	0.000	99.01	0.00	10.21	27.0	15.224
15.750	0.000	101.50	0.00	10.25	27.6	15.325
15.767	0.000	103.99	0.00	10.30	28.2	15.430
15.783	0.000	106.48	0.00	10.35	28.8	15.537
15.800	0.000	108.97	0.00	10.40	29.4	15.646
15.817	0.000	111.46	0.00	10.46	30.1	15.758
15.833	0.000	113.95	0.00	10.51	30.8	15.873
15.850	0.000	116.44	0.00	10.57	31.4	15.990
15.867	0.000	118.93	0.00	10.62	32.1	16.110
15.883	0.000	121.43	0.00	10.68	32.8	16.232
15.900	0.000	123.92	0.00	10.74	33.5	16.356
15.917	0.000	126.41	0.00	10.80	34.3	16.483
15.933	0.000	128.90	0.00	10.86	35.0	16.612
15.950	0.000	131.39	0.00	10.92	35.8	16.744
15.967	0.000	133.88	0.00	10.98	36.5	16.878
15.983	0.000	136.37	0.00	11.04	37.5	17.014
16.000	0.000	138.86	0.00	11.10	38.7	17.152
16.017	0.000	149.44	0.00	11.17	40.0	17.303
16.033	0.000	168.10	0.00	11.25	41.5	17.478
16.050	0.000	186.76	0.00	11.34	43.2	17.675
16.067	0.000	205.43	0.00	11.44	45.1	17.896
16.083	0.000	224.09	0.00	11.54	47.2	18.140
16.100	0.000	242.75	0.00	11.66	49.5	18.406

16.117	0.000	261.42	0.00	11.79	52.1	18.695
16.133	0.000	280.08	0.00	11.93	54.8	19.005
16.150	0.000	298.74	0.00	12.08	57.9	19.337
16.167	0.000	317.41	0.00	12.23	61.5	19.689
16.183	0.000	336.07	0.00	12.39	65.5	20.062
16.200	0.000	354.73	0.00	12.55	69.7	20.454
16.217	0.000	373.40	0.00	12.73	74.1	20.867
16.233	0.000	392.06	0.00	12.91	78.7	21.298
16.250	0.000	410.72	0.00	13.10	83.7	21.749
16.267	0.000	429.39	0.00	13.29	89.2	22.217
16.283	0.000	448.05	0.00	13.49	95.0	22.704
16.300	0.000	466.71	0.00	13.70	101.0	23.207
16.317	0.000	487.24	0.00	13.91	107.2	23.731
16.333	0.000	467.72	0.00	14.11	112.8	24.220
16.350	0.000	446.03	0.00	14.29	117.0	24.673
16.367	0.000	424.33	0.00	14.45	120.5	25.091
16.383	0.000	402.64	0.00	14.60	123.7	25.475
16.400	0.000	380.95	0.00	14.74	126.6	25.826
16.417	0.000	359.26	0.00	14.87	129.3	26.142
16.433	0.000	337.57	0.00	14.98	131.7	26.426
16.450	0.000	315.88	0.00	15.07	133.5	26.677
16.467	0.000	294.18	0.00	15.16	134.6	26.897
16.483	0.000	272.49	0.00	15.23	135.4	27.086
16.500	0.000	250.80	0.00	15.29	136.1	27.244
16.517	0.000	229.11	0.00	15.33	136.7	27.371
16.533	0.000	207.42	0.00	15.37	137.2	27.468
16.550	0.000	185.73	0.00	15.39	137.5	27.534
16.567	0.000	164.03	0.00	15.41	137.7	27.571
16.583	0.000	142.34	0.00	15.41	137.8	27.577
16.600	0.000	120.65	0.00	15.40	137.8	27.553
16.617	0.000	98.96	0.00	15.38	137.6	27.500
16.633	0.000	83.78	0.00	15.35	137.4	27.426
16.650	0.000	82.04	0.00	15.33	137.0	27.350
16.667	0.000	80.71	0.00	15.30	136.7	27.273
16.683	0.000	79.37	0.00	15.27	136.4	27.195
16.700	0.000	78.03	0.00	15.24	136.1	27.115
16.717	0.000	76.70	0.00	15.21	135.7	27.033
16.733	0.000	75.36	0.00	15.18	135.4	26.951
16.750	0.000	74.03	0.00	15.14	135.1	26.867
16.767	0.000	72.69	0.00	15.11	134.7	26.781
16.783	0.000	71.36	0.00	15.08	134.3	26.695
16.800	0.000	70.02	0.00	15.05	134.0	26.606
16.817	0.000	68.68	0.00	15.01	133.6	26.517
16.833	0.000	67.35	0.00	14.98	133.1	26.426
16.850	0.000	66.01	0.00	14.94	132.5	26.335
16.867	0.000	64.68	0.00	14.91	131.7	26.242
16.883	0.000	63.34	0.00	14.87	131.0	26.149
16.900	0.000	62.00	0.00	14.83	130.3	26.055
16.917	0.000	60.67	0.00	14.80	129.5	25.960
16.933	0.000	59.35	0.00	14.76	128.7	25.865
16.950	0.000	58.44	0.00	14.72	128.0	25.769
16.967	0.000	57.74	0.00	14.68	127.2	25.673
16.983	0.000	57.04	0.00	14.64	126.4	25.578
17.000	0.000	56.34	0.00	14.61	125.7	25.482
17.017	0.000	55.64	0.00	14.57	124.9	25.387
17.033	0.000	54.94	0.00	14.53	124.2	25.291
17.050	0.000	54.24	0.00	14.49	123.4	25.196
17.067	0.000	53.53	0.00	14.46	122.6	25.101

17.083	0.000	52.83	0.00	14.42	121.9	25.006
17.100	0.000	52.13	0.00	14.38	121.1	24.911
17.117	0.000	51.43	0.00	14.34	120.3	24.816
17.133	0.000	50.73	0.00	14.31	119.6	24.721
17.150	0.000	50.03	0.00	14.27	118.8	24.626
17.167	0.000	49.33	0.00	14.23	118.1	24.532
17.183	0.000	48.63	0.00	14.20	117.3	24.437
17.200	0.000	47.93	0.00	14.16	116.6	24.343
17.217	0.000	47.22	0.00	14.12	115.8	24.248
17.233	0.000	46.52	0.00	14.08	115.0	24.154
17.250	0.000	45.87	0.00	14.05	114.3	24.059
17.267	0.000	45.42	0.00	14.01	113.5	23.966
17.283	0.000	44.98	0.00	13.97	112.7	23.872
17.300	0.000	44.55	0.00	13.93	111.6	23.780
17.317	0.000	44.12	0.00	13.90	110.5	23.689
17.333	0.000	43.68	0.00	13.86	109.4	23.598
17.350	0.000	43.25	0.00	13.82	108.3	23.509
17.367	0.000	42.82	0.00	13.79	107.2	23.420
17.383	0.000	42.39	0.00	13.75	106.1	23.332
17.400	0.000	41.95	0.00	13.72	105.0	23.245
17.417	0.000	41.52	0.00	13.68	104.0	23.159
17.433	0.000	41.09	0.00	13.65	103.0	23.074
17.450	0.000	40.65	0.00	13.61	101.9	22.990
17.467	0.000	40.22	0.00	13.58	100.9	22.906
17.483	0.000	39.79	0.00	13.54	99.9	22.823
17.500	0.000	39.36	0.00	13.51	98.9	22.741
17.517	0.000	38.92	0.00	13.48	97.9	22.660
17.533	0.000	38.49	0.00	13.44	96.9	22.580
17.550	0.000	38.06	0.00	13.41	95.9	22.500
17.567	0.000	37.70	0.00	13.38	95.0	22.421
17.583	0.000	37.41	0.00	13.35	94.0	22.343
17.600	0.000	37.12	0.00	13.31	93.1	22.266
17.617	0.000	36.83	0.00	13.28	92.2	22.190
17.633	0.000	36.54	0.00	13.25	91.2	22.114
17.650	0.000	36.25	0.00	13.22	90.3	22.040
17.667	0.000	35.96	0.00	13.19	89.4	21.966
17.683	0.000	35.67	0.00	13.16	88.5	21.893
17.700	0.000	35.38	0.00	13.13	87.7	21.821
17.717	0.000	35.09	0.00	13.10	86.8	21.750
17.733	0.000	34.80	0.00	13.07	85.9	21.680
17.750	0.000	34.51	0.00	13.05	85.1	21.610
17.767	0.000	34.22	0.00	13.02	84.2	21.541
17.783	0.000	33.93	0.00	12.99	83.4	21.473
17.800	0.000	33.64	0.00	12.96	82.7	21.405
17.817	0.000	33.35	0.00	12.93	81.9	21.338
17.833	0.000	33.06	0.00	12.90	81.2	21.272
17.850	0.000	32.77	0.00	12.87	80.5	21.206
17.867	0.000	32.48	0.00	12.85	79.7	21.141
17.883	0.000	32.25	0.00	12.82	79.0	21.077
17.900	0.000	32.04	0.00	12.79	78.3	21.013
17.917	0.000	31.82	0.00	12.76	77.6	20.950
17.933	0.000	31.61	0.00	12.74	76.9	20.888
17.950	0.000	31.39	0.00	12.71	76.3	20.826
17.967	0.000	31.18	0.00	12.69	75.6	20.765
17.983	0.000	30.97	0.00	12.66	74.9	20.704
18.000	0.000	30.75	0.00	12.63	74.3	20.644
18.017	0.000	30.54	0.00	12.61	73.6	20.585
18.033	0.000	30.32	0.00	12.58	73.0	20.526

18.050	0.000	30.11	0.00	12.56	72.3	20.468
18.067	0.000	29.89	0.00	12.53	71.7	20.411
18.083	0.000	29.68	0.00	12.51	71.0	20.354
18.100	0.000	29.46	0.00	12.49	70.4	20.297
18.117	0.000	29.25	0.00	12.46	69.8	20.241
18.133	0.000	29.03	0.00	12.44	69.2	20.186
18.150	0.000	28.82	0.00	12.42	68.6	20.131
18.167	0.000	28.60	0.00	12.39	68.0	20.077
18.183	0.000	28.27	0.00	12.37	67.4	20.023
18.200	0.000	27.68	0.00	12.35	66.8	19.969
18.217	0.000	27.09	0.00	12.32	66.2	19.915
18.233	0.000	26.50	0.00	12.30	65.6	19.861
18.250	0.000	25.91	0.00	12.28	65.0	19.807
18.267	0.000	25.32	0.00	12.25	64.4	19.754
18.283	0.000	24.73	0.00	12.23	63.9	19.700
18.300	0.000	24.14	0.00	12.21	63.3	19.646
18.317	0.000	23.54	0.00	12.18	62.7	19.592
18.333	0.000	22.95	0.00	12.16	62.1	19.538
18.350	0.000	22.36	0.00	12.14	61.5	19.484
18.367	0.000	21.77	0.00	12.12	60.9	19.430
18.383	0.000	21.18	0.00	12.09	60.3	19.376
18.400	0.000	20.59	0.00	12.07	59.7	19.322
18.417	0.000	20.00	0.00	12.05	59.1	19.269
18.433	0.000	19.40	0.00	12.02	58.5	19.215
18.450	0.000	18.81	0.00	12.00	57.9	19.161
18.467	0.000	18.22	0.00	11.98	57.4	19.107
18.483	0.000	17.64	0.00	11.95	56.9	19.053
18.500	0.000	17.37	0.00	11.93	56.4	18.999
18.517	0.000	17.24	0.00	11.90	55.9	18.946
18.533	0.000	17.12	0.00	11.88	55.4	18.893
18.550	0.000	16.99	0.00	11.86	55.0	18.841
18.567	0.000	16.87	0.00	11.83	54.5	18.789
18.583	0.000	16.74	0.00	11.81	54.0	18.738
18.600	0.000	16.62	0.00	11.79	53.5	18.687
18.617	0.000	16.49	0.00	11.77	53.1	18.636
18.633	0.000	16.37	0.00	11.74	52.6	18.586
18.650	0.000	16.24	0.00	11.72	52.2	18.537
18.667	0.000	16.12	0.00	11.70	51.7	18.488
18.683	0.000	16.00	0.00	11.68	51.3	18.439
18.700	0.000	15.87	0.00	11.66	50.8	18.391
18.717	0.000	15.75	0.00	11.64	50.4	18.343
18.733	0.000	15.62	0.00	11.61	50.0	18.296
18.750	0.000	15.50	0.00	11.59	49.5	18.249
18.767	0.000	15.37	0.00	11.57	49.1	18.203
18.783	0.000	15.25	0.00	11.55	48.7	18.157
18.800	0.000	15.13	0.00	11.53	48.3	18.111
18.817	0.000	15.02	0.00	11.51	47.8	18.066
18.833	0.000	14.92	0.00	11.49	47.4	18.021
18.850	0.000	14.82	0.00	11.47	47.0	17.977
18.867	0.000	14.72	0.00	11.45	46.6	17.933
18.883	0.000	14.62	0.00	11.43	46.2	17.889
18.900	0.000	14.51	0.00	11.41	45.8	17.846
18.917	0.000	14.41	0.00	11.39	45.4	17.803
18.933	0.000	14.31	0.00	11.38	45.0	17.761
18.950	0.000	14.21	0.00	11.36	44.7	17.719
18.967	0.000	14.11	0.00	11.34	44.3	17.678
18.983	0.000	14.01	0.00	11.32	43.9	17.636
19.000	0.000	13.90	0.00	11.30	43.5	17.596

19.017	0.000	13.80	0.00	11.28	43.2	17.555
19.033	0.000	13.70	0.00	11.27	42.8	17.515
19.050	0.000	13.60	0.00	11.25	42.4	17.475
19.067	0.000	13.50	0.00	11.23	42.1	17.436
19.083	0.000	13.39	0.00	11.21	41.7	17.397
19.100	0.000	13.29	0.00	11.20	41.4	17.358
19.117	0.000	13.20	0.00	11.18	41.0	17.320
19.133	0.000	13.11	0.00	11.16	40.7	17.282
19.150	0.000	13.03	0.00	11.14	40.3	17.245
19.167	0.000	12.94	0.00	11.13	40.0	17.207
19.183	0.000	12.86	0.00	11.11	39.6	17.171
19.200	0.000	12.77	0.00	11.10	39.3	17.134
19.217	0.000	12.69	0.00	11.08	39.0	17.098
19.233	0.000	12.60	0.00	11.06	38.6	17.062
19.250	0.000	12.52	0.00	11.05	38.3	17.026
19.267	0.000	12.43	0.00	11.03	38.0	16.991
19.283	0.000	12.35	0.00	11.02	37.7	16.956
19.300	0.000	12.26	0.00	11.00	37.3	16.922
19.317	0.000	12.18	0.00	10.98	37.1	16.888
19.333	0.000	12.09	0.00	10.97	36.9	16.853
19.350	0.000	12.00	0.00	10.95	36.7	16.819
19.367	0.000	11.92	0.00	10.94	36.5	16.786
19.383	0.000	11.83	0.00	10.92	36.3	16.752
19.400	0.000	11.75	0.00	10.91	36.1	16.718
19.417	0.000	11.66	0.00	10.89	35.9	16.685
19.433	0.000	11.59	0.00	10.87	35.7	16.652
19.450	0.000	11.52	0.00	10.86	35.5	16.619
19.467	0.000	11.44	0.00	10.84	35.3	16.586
19.483	0.000	11.39	0.00	10.83	35.1	16.553
19.500	0.000	11.36	0.00	10.81	34.9	16.521
19.517	0.000	11.32	0.00	10.80	34.8	16.488
19.533	0.000	11.28	0.00	10.78	34.6	16.456
19.550	0.000	11.25	0.00	10.77	34.4	16.424
19.567	0.000	11.21	0.00	10.75	34.2	16.393
19.583	0.000	11.18	0.00	10.74	34.0	16.361
19.600	0.000	11.14	0.00	10.72	33.8	16.330
19.617	0.000	11.11	0.00	10.71	33.7	16.299
19.633	0.000	11.07	0.00	10.70	33.5	16.268
19.650	0.000	11.04	0.00	10.68	33.3	16.237
19.667	0.000	11.00	0.00	10.67	33.1	16.207
19.683	0.000	10.97	0.00	10.65	32.9	16.177
19.700	0.000	10.93	0.00	10.64	32.8	16.147
19.717	0.000	10.89	0.00	10.62	32.6	16.117
19.733	0.000	10.86	0.00	10.61	32.4	16.087
19.750	0.000	10.83	0.00	10.60	32.2	16.058
19.767	0.000	10.80	0.00	10.58	32.1	16.028
19.783	0.000	10.77	0.00	10.57	31.9	15.999
19.800	0.000	10.74	0.00	10.56	31.7	15.970
19.817	0.000	10.71	0.00	10.54	31.6	15.942
19.833	0.000	10.68	0.00	10.53	31.4	15.913
19.850	0.000	10.65	0.00	10.52	31.2	15.885
19.867	0.000	10.62	0.00	10.50	31.1	15.856
19.883	0.000	10.59	0.00	10.49	30.9	15.828
19.900	0.000	10.55	0.00	10.48	30.7	15.801
19.917	0.000	10.52	0.00	10.46	30.6	15.773
19.933	0.000	10.49	0.00	10.45	30.4	15.746
19.950	0.000	10.46	0.00	10.44	30.3	15.718
19.967	0.000	10.43	0.00	10.43	30.1	15.691

19.983	0.000	10.40	0.00	10.41	29.9	15.664
20.000	0.000	10.37	0.00	10.40	29.8	15.638

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 52.186 AF
BASIN STORAGE = 0.000 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 52.186 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 7

>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<<<
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FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 6

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<<<
=====

FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 2 HYDROGRAPH<<<<<<
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STREAM HYDROGRAPH IN ONE-MINUTE UNIT INTERVALS (CFS)
(Notes: Time indicated is at END of Each Unit Intervals.
Peak 5-minute rainfall intensity is modeled as
a constant value for entire 5-minute period.)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	50.0	100.0	150.0	200.0
10.000	5.5441	16.17	. VQ	.	.	.	.
10.017	5.5664	16.20	. VQ	.	.	.	.
10.033	5.5888	16.23	. VQ	.	.	.	.
10.050	5.6112	16.26	. VQ	.	.	.	.
10.067	5.6336	16.28	. Q	.	.	.	.
10.083	5.6560	16.31	. Q	.	.	.	.
10.100	5.6786	16.34	. Q	.	.	.	.
10.117	5.7011	16.36	. Q	.	.	.	.
10.133	5.7237	16.39	. Q	.	.	.	.
10.150	5.7463	16.42	. Q	.	.	.	.
10.167	5.7689	16.44	. Q	.	.	.	.
10.183	5.7916	16.47	. Q	.	.	.	.
10.200	5.8143	16.50	. Q	.	.	.	.
10.217	5.8371	16.52	. Q	.	.	.	.
10.233	5.8599	16.55	. Q	.	.	.	.
10.250	5.8827	16.57	. Q	.	.	.	.
10.267	5.9056	16.60	. Q	.	.	.	.
10.283	5.9285	16.62	. Q	.	.	.	.
10.300	5.9514	16.65	. Q	.	.	.	.
10.317	5.9744	16.67	. Q	.	.	.	.
10.333	5.9974	16.70	. Q	.	.	.	.

10.350	6.0204	16.72	. Q	.	.	.	.
10.367	6.0435	16.75	. Q	.	.	.	.
10.383	6.0666	16.77	. Q	.	.	.	.
10.400	6.0897	16.79	. Q	.	.	.	.
10.417	6.1129	16.82	. Q	.	.	.	.
10.433	6.1361	16.84	. Q	.	.	.	.
10.450	6.1593	16.86	. Q	.	.	.	.
10.467	6.1826	16.89	. Q	.	.	.	.
10.483	6.2059	16.91	. Q	.	.	.	.
10.500	6.2292	16.93	. Q	.	.	.	.
10.517	6.2525	16.96	. Q	.	.	.	.
10.533	6.2759	16.98	. Q	.	.	.	.
10.550	6.2994	17.00	. Q	.	.	.	.
10.567	6.3228	17.03	. Q	.	.	.	.
10.583	6.3463	17.05	. Q	.	.	.	.
10.600	6.3698	17.07	. Q	.	.	.	.
10.617	6.3934	17.09	. Q	.	.	.	.
10.633	6.4169	17.12	. Q	.	.	.	.
10.650	6.4405	17.14	. Q	.	.	.	.
10.667	6.4642	17.16	. Q	.	.	.	.
10.683	6.4878	17.18	. Q	.	.	.	.
10.700	6.5115	17.20	. Q	.	.	.	.
10.717	6.5353	17.23	. Q	.	.	.	.
10.733	6.5590	17.25	. Q	.	.	.	.
10.750	6.5828	17.27	. Q	.	.	.	.
10.767	6.6066	17.29	. Q	.	.	.	.
10.783	6.6305	17.31	. Q	.	.	.	.
10.800	6.6543	17.33	. Q	.	.	.	.
10.817	6.6782	17.35	. Q	.	.	.	.
10.833	6.7022	17.37	. Q	.	.	.	.
10.850	6.7261	17.40	. Q	.	.	.	.
10.867	6.7501	17.42	. Q	.	.	.	.
10.883	6.7741	17.44	. Q	.	.	.	.
10.900	6.7982	17.46	. Q	.	.	.	.
10.917	6.8223	17.48	. Q	.	.	.	.
10.933	6.8464	17.50	. Q	.	.	.	.
10.950	6.8705	17.52	. Q	.	.	.	.
10.967	6.8946	17.54	. Q	.	.	.	.
10.983	6.9188	17.56	. Q	.	.	.	.
11.000	6.9430	17.58	. Q	.	.	.	.
11.017	6.9673	17.60	. Q	.	.	.	.
11.033	6.9915	17.62	. Q	.	.	.	.
11.050	7.0158	17.64	. Q	.	.	.	.
11.067	7.0402	17.66	. Q	.	.	.	.
11.083	7.0645	17.68	. Q	.	.	.	.
11.100	7.0889	17.69	. Q	.	.	.	.
11.117	7.1133	17.71	. Q	.	.	.	.
11.133	7.1377	17.73	. Q	.	.	.	.
11.150	7.1622	17.75	. Q	.	.	.	.
11.167	7.1866	17.77	. Q	.	.	.	.
11.183	7.2111	17.79	. Q	.	.	.	.
11.200	7.2357	17.81	. Q	.	.	.	.
11.217	7.2602	17.83	. Q	.	.	.	.
11.233	7.2848	17.85	. Q	.	.	.	.
11.250	7.3094	17.87	. Q	.	.	.	.
11.267	7.3341	17.89	. Q	.	.	.	.
11.283	7.3587	17.90	. Q	.	.	.	.
11.300	7.3834	17.92	. Q	.	.	.	.

11.317	7.4081	17.94	.	Q	.	.	.
11.333	7.4329	17.96	.	Q	.	.	.
11.350	7.4576	17.98	.	Q	.	.	.
11.367	7.4824	18.00	.	QV	.	.	.
11.383	7.5072	18.02	.	QV	.	.	.
11.400	7.5321	18.04	.	QV	.	.	.
11.417	7.5569	18.05	.	QV	.	.	.
11.433	7.5818	18.07	.	QV	.	.	.
11.450	7.6068	18.09	.	QV	.	.	.
11.467	7.6317	18.11	.	QV	.	.	.
11.483	7.6567	18.13	.	QV	.	.	.
11.500	7.6817	18.15	.	QV	.	.	.
11.517	7.7067	18.16	.	QV	.	.	.
11.533	7.7317	18.18	.	QV	.	.	.
11.550	7.7568	18.20	.	QV	.	.	.
11.567	7.7819	18.22	.	QV	.	.	.
11.583	7.8070	18.23	.	QV	.	.	.
11.600	7.8321	18.25	.	QV	.	.	.
11.617	7.8573	18.27	.	QV	.	.	.
11.633	7.8825	18.29	.	QV	.	.	.
11.650	7.9077	18.31	.	QV	.	.	.
11.667	7.9329	18.32	.	QV	.	.	.
11.683	7.9582	18.34	.	QV	.	.	.
11.700	7.9835	18.36	.	QV	.	.	.
11.717	8.0088	18.37	.	QV	.	.	.
11.733	8.0341	18.39	.	QV	.	.	.
11.750	8.0595	18.41	.	QV	.	.	.
11.767	8.0849	18.43	.	QV	.	.	.
11.783	8.1103	18.44	.	QV	.	.	.
11.800	8.1357	18.46	.	QV	.	.	.
11.817	8.1612	18.48	.	QV	.	.	.
11.833	8.1866	18.50	.	QV	.	.	.
11.850	8.2121	18.51	.	QV	.	.	.
11.867	8.2377	18.53	.	QV	.	.	.
11.883	8.2632	18.55	.	QV	.	.	.
11.900	8.2888	18.57	.	QV	.	.	.
11.917	8.3144	18.58	.	QV	.	.	.
11.933	8.3400	18.60	.	QV	.	.	.
11.950	8.3657	18.62	.	QV	.	.	.
11.967	8.3913	18.64	.	QV	.	.	.
11.983	8.4170	18.65	.	QV	.	.	.
12.000	8.4428	18.67	.	QV	.	.	.
12.017	8.4685	18.69	.	QV	.	.	.
12.033	8.4943	18.71	.	QV	.	.	.
12.050	8.5201	18.74	.	QV	.	.	.
12.067	8.5459	18.76	.	QV	.	.	.
12.083	8.5718	18.79	.	QV	.	.	.
12.100	8.5977	18.82	.	QV	.	.	.
12.117	8.6237	18.85	.	QV	.	.	.
12.133	8.6497	18.88	.	QV	.	.	.
12.150	8.6757	18.91	.	QV	.	.	.
12.167	8.7018	18.94	.	QV	.	.	.
12.183	8.7280	18.97	.	QV	.	.	.
12.200	8.7541	19.00	.	QV	.	.	.
12.217	8.7803	19.03	.	QV	.	.	.
12.233	8.8066	19.06	.	QV	.	.	.
12.250	8.8329	19.09	.	QV	.	.	.
12.267	8.8592	19.12	.	QV	.	.	.

12.283	8.8856	19.16	.	QV	.	.	.
12.300	8.9121	19.19	.	QV	.	.	.
12.317	8.9385	19.22	.	QV	.	.	.
12.333	8.9651	19.26	.	QV	.	.	.
12.350	8.9916	19.29	.	QV	.	.	.
12.367	9.0182	19.33	.	QV	.	.	.
12.383	9.0449	19.36	.	QV	.	.	.
12.400	9.0716	19.40	.	QV	.	.	.
12.417	9.0984	19.43	.	QV	.	.	.
12.433	9.1252	19.47	.	QV	.	.	.
12.450	9.1521	19.51	.	QV	.	.	.
12.467	9.1790	19.55	.	QV	.	.	.
12.483	9.2060	19.59	.	QV	.	.	.
12.500	9.2330	19.63	.	QV	.	.	.
12.517	9.2601	19.67	.	QV	.	.	.
12.533	9.2873	19.71	.	QV	.	.	.
12.550	9.3145	19.75	.	QV	.	.	.
12.567	9.3418	19.80	.	QV	.	.	.
12.583	9.3691	19.84	.	Q V	.	.	.
12.600	9.3965	19.88	.	Q V	.	.	.
12.617	9.4239	19.93	.	Q V	.	.	.
12.633	9.4514	19.97	.	Q V	.	.	.
12.650	9.4790	20.02	.	QV	.	.	.
12.667	9.5066	20.06	.	QV	.	.	.
12.683	9.5343	20.10	.	QV	.	.	.
12.700	9.5621	20.15	.	QV	.	.	.
12.717	9.5899	20.19	.	QV	.	.	.
12.733	9.6178	20.24	.	QV	.	.	.
12.750	9.6457	20.28	.	QV	.	.	.
12.767	9.6737	20.32	.	QV	.	.	.
12.783	9.7018	20.37	.	QV	.	.	.
12.800	9.7299	20.41	.	QV	.	.	.
12.817	9.7581	20.46	.	QV	.	.	.
12.833	9.7863	20.50	.	QV	.	.	.
12.850	9.8146	20.54	.	QV	.	.	.
12.867	9.8429	20.59	.	QV	.	.	.
12.883	9.8714	20.63	.	QV	.	.	.
12.900	9.8998	20.68	.	QV	.	.	.
12.917	9.9284	20.72	.	QV	.	.	.
12.933	9.9570	20.76	.	QV	.	.	.
12.950	9.9856	20.81	.	QV	.	.	.
12.967	10.0144	20.85	.	QV	.	.	.
12.983	10.0432	20.90	.	QV	.	.	.
13.000	10.0720	20.94	.	QV	.	.	.
13.017	10.1009	21.00	.	QV	.	.	.
13.033	10.1300	21.11	.	QV	.	.	.
13.050	10.1593	21.26	.	QV	.	.	.
13.067	10.1888	21.41	.	QV	.	.	.
13.083	10.2185	21.56	.	QV	.	.	.
13.100	10.2484	21.71	.	QV	.	.	.
13.117	10.2785	21.86	.	QV	.	.	.
13.133	10.3088	22.01	.	QV	.	.	.
13.150	10.3394	22.16	.	QV	.	.	.
13.167	10.3701	22.31	.	QV	.	.	.
13.183	10.4010	22.46	.	QV	.	.	.
13.200	10.4322	22.61	.	QV	.	.	.
13.217	10.4635	22.76	.	QV	.	.	.
13.233	10.4951	22.91	.	QV	.	.	.

13.250	10.5268	23.06	.	QV	.	.	.	.
13.267	10.5588	23.21	.	QV	.	.	.	.
13.283	10.5910	23.36	.	QV	.	.	.	.
13.300	10.6234	23.51	.	QV	.	.	.	.
13.317	10.6560	23.66	.	QV	.	.	.	.
13.333	10.6888	23.81	.	QV	.	.	.	.
13.350	10.7217	23.96	.	QV	.	.	.	.
13.367	10.7549	24.10	.	QV	.	.	.	.
13.383	10.7884	24.25	.	QV	.	.	.	.
13.400	10.8220	24.40	.	QV	.	.	.	.
13.417	10.8558	24.55	.	QV	.	.	.	.
13.433	10.8898	24.69	.	QV	.	.	.	.
13.450	10.9240	24.84	.	QV	.	.	.	.
13.467	10.9584	24.99	.	QV	.	.	.	.
13.483	10.9930	25.13	.	Q	.	.	.	.
13.500	11.0279	25.28	.	Q	.	.	.	.
13.517	11.0629	25.42	.	Q	.	.	.	.
13.533	11.0981	25.57	.	Q	.	.	.	.
13.550	11.1335	25.72	.	Q	.	.	.	.
13.567	11.1691	25.86	.	Q	.	.	.	.
13.583	11.2050	26.01	.	Q	.	.	.	.
13.600	11.2410	26.16	.	QV	.	.	.	.
13.617	11.2772	26.31	.	QV	.	.	.	.
13.633	11.3137	26.45	.	QV	.	.	.	.
13.650	11.3503	26.60	.	QV	.	.	.	.
13.667	11.3872	26.75	.	QV	.	.	.	.
13.683	11.4242	26.90	.	QV	.	.	.	.
13.700	11.4615	27.05	.	QV	.	.	.	.
13.717	11.4990	27.21	.	QV	.	.	.	.
13.733	11.5366	27.36	.	QV	.	.	.	.
13.750	11.5745	27.51	.	QV	.	.	.	.
13.767	11.6126	27.66	.	QV	.	.	.	.
13.783	11.6509	27.82	.	QV	.	.	.	.
13.800	11.6895	27.97	.	QV	.	.	.	.
13.817	11.7282	28.12	.	QV	.	.	.	.
13.833	11.7672	28.28	.	QV	.	.	.	.
13.850	11.8063	28.43	.	QV	.	.	.	.
13.867	11.8457	28.57	.	QV	.	.	.	.
13.883	11.8852	28.67	.	QV	.	.	.	.
13.900	11.9248	28.77	.	QV	.	.	.	.
13.917	11.9646	28.87	.	QV	.	.	.	.
13.933	12.0045	28.97	.	QV	.	.	.	.
13.950	12.0445	29.07	.	QV	.	.	.	.
13.967	12.0847	29.17	.	QV	.	.	.	.
13.983	12.1250	29.26	.	QV	.	.	.	.
14.000	12.1654	29.36	.	QV	.	.	.	.
14.017	12.2060	29.46	.	QV	.	.	.	.
14.033	12.2467	29.56	.	QV	.	.	.	.
14.050	12.2876	29.66	.	QV	.	.	.	.
14.067	12.3286	29.76	.	QV	.	.	.	.
14.083	12.3697	29.86	.	QV	.	.	.	.
14.100	12.4110	29.96	.	QV	.	.	.	.
14.117	12.4524	30.06	.	Q	.	.	.	.
14.133	12.4939	30.16	.	Q	.	.	.	.
14.150	12.5356	30.26	.	Q	.	.	.	.
14.167	12.5774	30.36	.	Q	.	.	.	.
14.183	12.6194	30.47	.	Q	.	.	.	.
14.200	12.6615	30.57	.	Q	.	.	.	.

14.217	12.7038	30.67	.	Q	.	.	.	.
14.233	12.7462	30.78	.	Q	.	.	.	.
14.250	12.7887	30.88	.	Q	.	.	.	.
14.267	12.8314	30.99	.	Q	.	.	.	.
14.283	12.8742	31.10	.	Q	.	.	.	.
14.300	12.9172	31.21	.	Q	.	.	.	.
14.317	12.9603	31.32	.	Q	.	.	.	.
14.333	13.0036	31.43	.	Q	.	.	.	.
14.350	13.0471	31.54	.	Q	.	.	.	.
14.367	13.0907	31.66	.	Q	.	.	.	.
14.383	13.1345	31.77	.	QV	.	.	.	.
14.400	13.1784	31.89	.	QV	.	.	.	.
14.417	13.2225	32.00	.	QV	.	.	.	.
14.433	13.2667	32.12	.	QV	.	.	.	.
14.450	13.3111	32.24	.	QV	.	.	.	.
14.467	13.3557	32.36	.	QV	.	.	.	.
14.483	13.4004	32.48	.	QV	.	.	.	.
14.500	13.4453	32.60	.	QV	.	.	.	.
14.517	13.4904	32.72	.	QV	.	.	.	.
14.533	13.5356	32.84	.	QV	.	.	.	.
14.550	13.5810	32.96	.	QV	.	.	.	.
14.567	13.6266	33.08	.	QV	.	.	.	.
14.583	13.6723	33.20	.	QV	.	.	.	.
14.600	13.7182	33.33	.	QV	.	.	.	.
14.617	13.7643	33.45	.	QV	.	.	.	.
14.633	13.8105	33.56	.	QV	.	.	.	.
14.650	13.8569	33.66	.	QV	.	.	.	.
14.667	13.9034	33.76	.	QV	.	.	.	.
14.683	13.9500	33.85	.	QV	.	.	.	.
14.700	13.9968	33.94	.	QV	.	.	.	.
14.717	14.0437	34.04	.	QV	.	.	.	.
14.733	14.0907	34.14	.	QV	.	.	.	.
14.750	14.1378	34.23	.	QV	.	.	.	.
14.767	14.1851	34.33	.	QV	.	.	.	.
14.783	14.2325	34.43	.	QV	.	.	.	.
14.800	14.2801	34.52	.	QV	.	.	.	.
14.817	14.3278	34.63	.	QV	.	.	.	.
14.833	14.3756	34.73	.	QV	.	.	.	.
14.850	14.4236	34.83	.	QV	.	.	.	.
14.867	14.4717	34.94	.	QV	.	.	.	.
14.883	14.5200	35.04	.	Q	.	.	.	.
14.900	14.5684	35.15	.	Q	.	.	.	.
14.917	14.6170	35.26	.	Q	.	.	.	.
14.933	14.6657	35.37	.	Q	.	.	.	.
14.950	14.7146	35.49	.	Q	.	.	.	.
14.967	14.7636	35.60	.	Q	.	.	.	.
14.983	14.8128	35.72	.	Q	.	.	.	.
15.000	14.8622	35.84	.	Q	.	.	.	.
15.017	14.9117	35.95	.	Q	.	.	.	.
15.033	14.9614	36.08	.	Q	.	.	.	.
15.050	15.0112	36.20	.	QV	.	.	.	.
15.067	15.0613	36.32	.	QV	.	.	.	.
15.083	15.1115	36.45	.	QV	.	.	.	.
15.100	15.1619	36.57	.	QV	.	.	.	.
15.117	15.2124	36.70	.	QV	.	.	.	.
15.133	15.2631	36.83	.	QV	.	.	.	.
15.150	15.3140	36.96	.	QV	.	.	.	.
15.167	15.3651	37.09	.	QV	.	.	.	.

15.183	15.4164	37.22	.	QV	.	.	.
15.200	15.4679	37.35	.	QV	.	.	.
15.217	15.5195	37.48	.	QV	.	.	.
15.233	15.5713	37.60	.	QV	.	.	.
15.250	15.6232	37.71	.	QV	.	.	.
15.267	15.6753	37.83	.	QV	.	.	.
15.283	15.7276	37.94	.	QV	.	.	.
15.300	15.7800	38.06	.	QV	.	.	.
15.317	15.8326	38.17	.	QV	.	.	.
15.333	15.8853	38.29	.	QV	.	.	.
15.350	15.9382	38.41	.	QV	.	.	.
15.367	15.9913	38.53	.	QV	.	.	.
15.383	16.0445	38.65	.	QV	.	.	.
15.400	16.0979	38.77	.	QV	.	.	.
15.417	16.1515	38.89	.	QV	.	.	.
15.433	16.2052	39.01	.	QV	.	.	.
15.450	16.2591	39.14	.	QV	.	.	.
15.467	16.3132	39.27	.	QV	.	.	.
15.483	16.3675	39.40	.	QV	.	.	.
15.500	16.4220	39.54	.	QV	.	.	.
15.517	16.4766	39.67	.	QV	.	.	.
15.533	16.5315	39.81	.	QV	.	.	.
15.550	16.5865	39.95	.	QV	.	.	.
15.567	16.6417	40.10	.	Q	.	.	.
15.583	16.6971	40.24	.	Q	.	.	.
15.600	16.7528	40.39	.	Q	.	.	.
15.617	16.8086	40.54	.	Q	.	.	.
15.633	16.8647	40.69	.	QV	.	.	.
15.650	16.9209	40.85	.	QV	.	.	.
15.667	16.9776	41.14	.	QV	.	.	.
15.683	17.0349	41.64	.	QV	.	.	.
15.700	17.0931	42.21	.	QV	.	.	.
15.717	17.1520	42.80	.	QV	.	.	.
15.733	17.2118	43.40	.	QV	.	.	.
15.750	17.2724	44.02	.	QV	.	.	.
15.767	17.3339	44.65	.	QV	.	.	.
15.783	17.3963	45.30	.	Q	.	.	.
15.800	17.4597	45.97	.	Q	.	.	.
15.817	17.5239	46.65	.	Q	.	.	.
15.833	17.5891	47.35	.	Q	.	.	.
15.850	17.6553	48.07	.	Q	.	.	.
15.867	17.7226	48.80	.	Q	.	.	.
15.883	17.7908	49.55	.	Q	.	.	.
15.900	17.8601	50.31	.	VQ	.	.	.
15.917	17.9305	51.09	.	VQ	.	.	.
15.933	18.0019	51.88	.	VQ	.	.	.
15.950	18.0745	52.67	.	VQ	.	.	.
15.967	18.1481	53.47	.	VQ	.	.	.
15.983	18.2231	54.44	.	VQ	.	.	.
16.000	18.2998	55.65	.	V.Q	.	.	.
16.017	18.3783	57.01	.	V.Q	.	.	.
16.033	18.4589	58.53	.	V.Q	.	.	.
16.050	18.5420	60.27	.	V.Q	.	.	.
16.067	18.6277	62.23	.	V.Q	.	.	.
16.083	18.7164	64.41	.	V.Q	.	.	.
16.100	18.8084	66.81	.	V.Q	.	.	.
16.117	18.9040	69.41	.	V.Q	.	.	.
16.133	19.0035	72.22	.	V.Q	.	.	.

16.150	19.1074	75.40	.	V	Q	.	.
16.167	19.2163	79.11	.	V	Q	.	.
16.183	19.3309	83.19	.	V	Q	.	.
16.200	19.4514	87.49	.	V	Q	.	.
16.217	19.5782	92.02	.	V	Q	.	.
16.233	19.7115	96.77	.	V	Q	.	.
16.250	19.8518	101.88	.	V	Q	.	.
16.267	19.9998	107.47	.	V	Q	.	.
16.283	20.1560	113.41	.	V	Q	.	.
16.300	20.3207	119.57	.	V	Q	.	.
16.317	20.4942	125.96	.	V	Q	.	.
16.333	20.6756	131.67	.	.V	Q	.	.
16.350	20.8629	136.02	.	.V	Q	.	.
16.367	21.0553	139.63	.	.V	Q	.	.
16.383	21.2522	142.97	.	.V	Q	.	.
16.400	21.4533	146.02	.	.V	Q	.	.
16.417	21.6583	148.79	.	.V	Q	.	.
16.433	21.8667	151.29	.	.V	Q	.	.
16.450	22.0776	153.13	.	.V	Q	.	.
16.467	22.2901	154.29	.	.V	Q	.	.
16.483	22.5039	155.21	.	.V	Q	.	.
16.500	22.7188	155.99	.	.V	Q	.	.
16.517	22.9345	156.63	.	.V	Q	.	.
16.533	23.1509	157.14	.	.V	Q	.	.
16.550	23.3679	157.51	.	.V	Q	.	.
16.567	23.5852	157.75	.	.V	Q	.	.
16.583	23.8026	157.86	.	.V	Q	.	.
16.600	24.0200	157.83	.	.V	Q	.	.
16.617	24.2372	157.68	.	.V	Q	.	.
16.633	24.4540	157.41	.	.V	Q	.	.
16.650	24.6704	157.09	.	.V	Q	.	.
16.667	24.8863	156.76	.	.V	Q	.	.
16.683	25.1018	156.43	.	.V	Q	.	.
16.700	25.3168	156.10	.	.V	Q	.	.
16.717	25.5314	155.75	.	.V	Q	.	.
16.733	25.7454	155.40	.	.V	Q	.	.
16.750	25.9590	155.04	.	.V	Q	.	.
16.767	26.1720	154.68	.	.V	Q	.	.
16.783	26.3846	154.31	.	.V	Q	.	.
16.800	26.5966	153.94	.	.V	Q	.	.
16.817	26.8081	153.56	.	.V	Q	.	.
16.833	27.0190	153.07	.	.V	Q	.	.
16.850	27.2289	152.40	.	.V	Q	.	.
16.867	27.4378	151.65	.	.V	Q	.	.
16.883	27.6456	150.89	.	.V	Q	.	.
16.900	27.8524	150.13	.	.V	Q	.	.
16.917	28.0581	149.36	.	.V	Q	.	.
16.933	28.2628	148.58	.	.V	Q	.	.
16.950	28.4663	147.80	.	.V	Q	.	.
16.967	28.6688	147.02	.	.V	Q	.	.
16.983	28.8703	146.23	.	.V	Q	.	.
17.000	29.0706	145.45	.	.V	Q	.	.
17.017	29.2699	144.67	.	.V	Q	.	.
17.033	29.4681	143.89	.	.V	Q	.	.
17.050	29.6652	143.11	.	.V	Q	.	.
17.067	29.8613	142.33	.	.V	Q	.	.
17.083	30.0562	141.55	.	.V	Q	.	.
17.100	30.2501	140.78	.	.V	Q	.	.

17.117	30.4430	140.00	.	.	V	.	Q	.	.
17.133	30.6347	139.22	.	.	V	.	Q	.	.
17.150	30.8254	138.45	.	.	V	.	Q	.	.
17.167	31.0151	137.67	.	.	V	.	Q	.	.
17.183	31.2036	136.89	.	.	V	.	Q	.	.
17.200	31.3911	136.12	.	.	V	.	Q	.	.
17.217	31.5775	135.34	.	.	V	.	Q	.	.
17.233	31.7629	134.57	.	.	V	.	Q	.	.
17.250	31.9472	133.79	.	.	V	.	Q	.	.
17.267	32.1304	133.02	.	.	V	.	Q	.	.
17.283	32.3124	132.12	.	.	V	.	Q	.	.
17.300	32.4929	131.02	.	.	V	.	Q	.	.
17.317	32.6718	129.89	.	.	V	.	Q	.	.
17.333	32.8491	128.76	.	.	V	.	Q	.	.
17.350	33.0250	127.65	.	.	V	.	Q	.	.
17.367	33.1993	126.55	.	.	V	.	Q	.	.
17.383	33.3721	125.46	.	.	V	.	Q	.	.
17.400	33.5434	124.38	.	.	V	.	Q	.	.
17.417	33.7132	123.31	.	.	V	.	Q	.	.
17.433	33.8816	122.25	.	.	V	.	Q	.	.
17.450	34.0486	121.20	.	.	V	.	Q	.	.
17.467	34.2141	120.16	.	.	V	.	Q	.	.
17.483	34.3781	119.12	.	.	V	.	Q	.	.
17.500	34.5408	118.10	.	.	V	.	Q	.	.
17.517	34.7021	117.09	.	.	V	.	Q	.	.
17.533	34.8620	116.09	.	.	V	.	Q	.	.
17.550	35.0205	115.10	.	.	V	.	Q	.	.
17.567	35.1777	114.11	.	.	V	.	Q	.	.
17.583	35.3335	113.14	.	.	V	.	Q	.	.
17.600	35.4881	112.18	.	.	V	.	Q	.	.
17.617	35.6413	111.22	.	.	V	.	Q	.	.
17.633	35.7932	110.28	.	.	V	.	Q	.	.
17.650	35.9438	109.35	.	.	V	.	Q	.	.
17.667	36.0932	108.43	.	.	V	.	Q	.	.
17.683	36.2413	107.52	.	.	V	.	Q	.	.
17.700	36.3881	106.62	.	.	V	.	Q	.	.
17.717	36.5338	105.73	.	.	V	.	Q	.	.
17.733	36.6782	104.85	.	.	V	.	Q	.	.
17.750	36.8214	103.98	.	.	V	.	Q	.	.
17.767	36.9634	103.12	.	.	V	.	Q	.	.
17.783	37.1043	102.28	.	.	V	.	Q	.	.
17.800	37.2441	101.49	.	.	V	.	Q	.	.
17.817	37.3829	100.73	.	.	V	.	Q	.	.
17.833	37.5206	99.98	.	.	V	.	Q	.	.
17.850	37.6573	99.24	.	.	V	.	Q	.	.
17.867	37.7930	98.50	.	.	V	.	Q	.	.
17.883	37.9276	97.77	.	.	V	.	Q	.	.
17.900	38.0613	97.05	.	.	V	.	Q	.	.
17.917	38.1940	96.33	.	.	V	.	Q	.	.
17.933	38.3257	95.62	.	.	V	.	Q	.	.
17.950	38.4564	94.92	.	.	V	.	Q	.	.
17.967	38.5862	94.22	.	.	V	.	Q	.	.
17.983	38.7150	93.53	.	.	V	.	Q	.	.
18.000	38.8429	92.85	.	.	V	.	Q	.	.
18.017	38.9699	92.18	.	.	V	.	Q	.	.
18.033	39.0960	91.51	.	.	V	.	Q	.	.
18.050	39.2211	90.85	.	.	V	.	Q	.	.
18.067	39.3453	90.19	.	.	V	.	Q	.	.

18.083	39.4687	89.55	.	.	V	.	Q	.	.
18.100	39.5911	88.90	.	.	V	.	Q	.	.
18.117	39.7127	88.27	.	.	V	.	Q	.	.
18.133	39.8334	87.64	.	.	V	.	Q	.	.
18.150	39.9533	87.01	.	.	V	.	Q	.	.
18.167	40.0723	86.39	.	.	V	.	Q	.	.
18.183	40.1904	85.78	.	.	V	.	Q	.	.
18.200	40.3077	85.17	.	.	V	.	Q	.	.
18.217	40.4242	84.56	.	.	V	.	Q	.	.
18.233	40.5398	83.95	.	.	V	.	Q	.	.
18.250	40.6546	83.33	.	.	V	.	Q	.	.
18.267	40.7686	82.72	.	.	V	.	Q	.	.
18.283	40.8817	82.11	.	.	V	.	Q	.	.
18.300	40.9939	81.50	.	.	V	.	Q	.	.
18.317	41.1053	80.88	.	.	V	.	Q	.	.
18.333	41.2159	80.27	.	.	V	.	Q	.	.
18.350	41.3256	79.66	.	.	V	.	Q	.	.
18.367	41.4345	79.05	.	.	V	.	Q	.	.
18.383	41.5425	78.43	.	.	V	.	Q	.	.
18.400	41.6497	77.82	.	.	V	.	Q	.	.
18.417	41.7561	77.21	.	.	V	.	Q	.	.
18.433	41.8616	76.60	.	.	V	.	Q	.	.
18.450	41.9662	75.98	.	.	V	.	Q	.	.
18.467	42.0701	75.42	.	.	V	.	Q	.	.
18.483	42.1733	74.90	.	.	V	.	Q	.	.
18.500	42.2758	74.39	.	.	V	.	Q	.	.
18.517	42.3775	73.88	.	.	V	.	Q	.	.
18.533	42.4786	73.37	.	.	V	.	Q	.	.
18.550	42.5789	72.87	.	.	V	.	Q	.	.
18.567	42.6786	72.37	.	.	V	.	Q	.	.
18.583	42.7776	71.88	.	.	V	.	Q	.	.
18.600	42.8760	71.39	.	.	V	.	Q	.	.
18.617	42.9737	70.91	.	.	V	.	Q	.	.
18.633	43.0707	70.43	.	.	V	.	Q	.	.
18.650	43.1670	69.95	.	.	V	.	Q	.	.
18.667	43.2627	69.48	.	.	V	.	Q	.	.
18.683	43.3578	69.02	.	.	V	.	Q	.	.
18.700	43.4522	68.55	.	.	V	.	Q	.	.
18.717	43.5460	68.09	.	.	V	.	Q	.	.
18.733	43.6392	67.64	.	.	V	.	Q	.	.
18.750	43.7317	67.19	.	.	V	.	Q	.	.
18.767	43.8237	66.74	.	.	V	.	Q	.	.
18.783	43.9150	66.30	.	.	V	.	Q	.	.
18.800	44.0057	65.86	.	.	V	.	Q	.	.
18.817	44.0958	65.42	.	.	V	.	Q	.	.
18.833	44.1853	64.99	.	.	V	.	Q	.	.
18.850	44.2743	64.57	.	.	V	.	Q	.	.
18.867	44.3626	64.14	.	.	V	.	Q	.	.
18.883	44.4504	63.72	.	.	V	.	Q	.	.
18.900	44.5376	63.31	.	.	V	.	Q	.	.
18.917	44.6242	62.89	.	.	V	.	Q	.	.
18.933	44.7103	62.49	.	.	V	.	Q	.	.
18.950	44.7958	62.08	.	.	V	.	Q	.	.
18.967	44.8808	61.68	.	.	V	.	Q	.	.
18.983	44.9652	61.28	.	.	V	.	Q	.	.
19.000	45.0490	60.89	.	.	V	.	Q	.	.
19.017	45.1324	60.50	.	.	V	.	Q	.	.
19.033	45.2152	60.11	.	.	V	.	Q	.	.

19.050	45.2974	59.73	.	.Q	.	V	.	.
19.067	45.3792	59.35	.	.Q	.	V	.	.
19.083	45.4604	58.97	.	.Q	.	V	.	.
19.100	45.5411	58.59	.	.Q	.	V	.	.
19.117	45.6213	58.22	.	.Q	.	V	.	.
19.133	45.7010	57.86	.	.Q	.	V	.	.
19.150	45.7802	57.49	.	.Q	.	V	.	.
19.167	45.8589	57.13	.	.Q	.	V	.	.
19.183	45.9371	56.77	.	.Q	.	V	.	.
19.200	46.0148	56.42	.	.Q	.	V	.	.
19.217	46.0920	56.07	.	.Q	.	V	.	.
19.233	46.1688	55.72	.	.Q	.	V	.	.
19.250	46.2450	55.38	.	.Q	.	V	.	.
19.267	46.3209	55.04	.	.Q	.	V	.	.
19.283	46.3962	54.70	.	Q	.	V	.	.
19.300	46.4711	54.36	.	Q	.	V	.	.
19.317	46.5456	54.08	.	Q	.	V	.	.
19.333	46.6198	53.86	.	Q	.	V	.	.
19.350	46.6937	53.65	.	Q	.	V	.	.
19.367	46.7673	53.43	.	Q	.	V	.	.
19.383	46.8405	53.22	.	Q	.	V	.	.
19.400	46.9136	53.00	.	Q	.	V	.	.
19.417	46.9863	52.79	.	Q	.	V	.	.
19.433	47.0587	52.57	.	Q	.	V	.	.
19.450	47.1308	52.35	.	Q	.	V	.	.
19.467	47.2026	52.12	.	Q	.	V	.	.
19.483	47.2741	51.90	.	Q	.	V	.	.
19.500	47.3452	51.68	.	Q	.	V	.	.
19.517	47.4161	51.46	.	Q	.	V	.	.
19.533	47.4867	51.24	.	Q	.	V	.	.
19.550	47.5570	51.02	.	Q	.	V	.	.
19.567	47.6269	50.80	.	Q	.	V	.	.
19.583	47.6966	50.58	.	Q	.	V	.	.
19.600	47.7660	50.37	.	Q	.	V	.	.
19.617	47.8351	50.15	.	Q	.	V	.	.
19.633	47.9039	49.94	.	Q.	.	V	.	.
19.650	47.9724	49.73	.	Q.	.	V	.	.
19.667	48.0406	49.52	.	Q.	.	V	.	.
19.683	48.1085	49.31	.	Q.	.	V	.	.
19.700	48.1761	49.10	.	Q.	.	V	.	.
19.717	48.2435	48.89	.	Q.	.	V	.	.
19.733	48.3105	48.68	.	Q.	.	V	.	.
19.750	48.3773	48.48	.	Q.	.	V	.	.
19.767	48.4438	48.27	.	Q.	.	V	.	.
19.783	48.5100	48.07	.	Q.	.	V	.	.
19.800	48.5759	47.87	.	Q.	.	V	.	.
19.817	48.6416	47.67	.	Q.	.	V	.	.
19.833	48.7070	47.46	.	Q.	.	V	.	.
19.850	48.7721	47.27	.	Q.	.	V	.	.
19.867	48.8369	47.07	.	Q.	.	V	.	.
19.883	48.9015	46.87	.	Q.	.	V	.	.
19.900	48.9657	46.67	.	Q.	.	V	.	.
19.917	49.0298	46.48	.	Q.	.	V	.	.
19.933	49.0935	46.28	.	Q.	.	V	.	.
19.950	49.1570	46.09	.	Q.	.	V	.	.
19.967	49.2202	45.90	.	Q.	.	V	.	.
19.983	49.2832	45.71	.	Q.	.	V	.	.
20.000	49.3459	45.52	.	Q.	.	V	.	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1201.0
10%	1201.0
20%	1201.0
30%	1200.0
40%	850.0
50%	665.0
60%	520.0
70%	405.0
80%	315.0
90%	210.0
=====	=====

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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED B *
* SMALL AREA HYDROGRAPH - COMPLEX MODEL *
* 2-YR EV JULY 2022 ROKAMOTO *

FILE NAME: 3B02EVC.DAT
TIME/DATE OF STUDY: 14:12 07/15/2022

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 210.00 TO NODE 230.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 213.70
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.256
LOW LOSS FRACTION = 0.496
TIME OF CONCENTRATION (MIN.) = 21.51
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 2
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.13
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.28
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.37
3-HOUR POINT RAINFALL VALUE (INCHES) = 0.62
6-HOUR POINT RAINFALL VALUE (INCHES) = 0.85
24-HOUR POINT RAINFALL VALUE (INCHES) = 1.44

FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2

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

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

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-10 showing basin data.

FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	1.84	0.260
3	2.00	3.22	1.160
4	3.00	4.16	2.520
5	4.00	4.94	3.990
6	5.00	5.60	5.550
7	6.00	7.17	7.200
8	7.00	14.13	8.950
9	8.00	18.54	10.800
10	9.00	21.90	12.740
11	10.00	24.73	14.780
12	11.00	37.17	16.920
13	12.00	57.63	19.160
14	13.00	83.32	21.500
15	14.00	112.96	23.940
16	15.00	133.28	26.480
17	16.00	144.34	29.150
18	17.00	154.45	31.950
19	18.00	163.94	34.870
20	19.00	172.92	37.940
21	20.00	181.39	41.140
22	21.00	189.45	44.500
23	22.00	197.22	48.010
24	23.00	466.70	51.740
25	24.00	951.81	53.820

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 7

>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 6

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 11

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

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+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3B02EVC.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 |
+-----+
| 210.00 230.00| Subarea (UH) Added to Stream #2| 0.0 81.0|
16.367 | | 4 |
| 221.00 221.00| Flowby Basin Model: Stream #2| 81.0 17.2|
16.367 | | |
| 221.00 223.00| Flow-Through Basin: Stream #2| 17.2 4.1|
17.750 | 2.17| |
| 221.00 222.00| Flow-Through Basin: Stream #5| 63.8 4.4|
17.283 | 2.90| |
| 225.00 225.00| Stream #5 Added to: Stream #2| 4.1 8.4|
17.683 | | |
+-----+
| 225.00 225.00| Zero Out: Stream #5| 4.4 0.0|
|
| 225.00 225.00| View: Stream #2| 8.4|
17.683 | 9.68| 3 |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT
INTERVAL
|
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
|
| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS
GREATER THAN 1 SQ MI
|
+-----+

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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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED B *
* SMALL AREA HYDROGRAPH - COMPLEX MODEL *
* 5-YR EV JULY 2022 ROKAMOTO *

FILE NAME: 3B05EVC.DAT
TIME/DATE OF STUDY: 14:11 07/15/2022

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 210.00 TO NODE 230.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 213.70
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.213
LOW LOSS FRACTION = 0.443
TIME OF CONCENTRATION (MIN.) = 19.59
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 5
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.18
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.41
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.55
3-HOUR POINT RAINFALL VALUE (INCHES) = 0.92
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.27
24-HOUR POINT RAINFALL VALUE (INCHES) = 2.12

FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2

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

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

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-10 showing basin data.

FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	1.84	0.260
3	2.00	3.22	1.160
4	3.00	4.16	2.520
5	4.00	4.94	3.990
6	5.00	5.60	5.550
7	6.00	7.17	7.200
8	7.00	14.13	8.950
9	8.00	18.54	10.800
10	9.00	21.90	12.740
11	10.00	24.73	14.780
12	11.00	37.17	16.920
13	12.00	57.63	19.160
14	13.00	83.32	21.500
15	14.00	112.96	23.940
16	15.00	133.28	26.480
17	16.00	144.34	29.150
18	17.00	154.45	31.950
19	18.00	163.94	34.870
20	19.00	172.92	37.940
21	20.00	181.39	41.140
22	21.00	189.45	44.500
23	22.00	197.22	48.010
24	23.00	466.70	51.740
25	24.00	951.81	53.820

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 7

>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 6

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 11

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

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+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3B05EVC.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 |
+-----+
+-----+
| 210.00 230.00| Subarea (UH) Added to Stream #2| 0.0 157.6|
16.333 | | 4 |
| 221.00 221.00| Flowby Basin Model: Stream #2| 157.6 22.2|
16.333 | | |
| 221.00 223.00| Flow-Through Basin: Stream #2| 22.2 10.5|
16.950 | 3.27| |
| 221.00 222.00| Flow-Through Basin: Stream #5| 135.4 6.3|
17.517 | 6.28| |
| 225.00 225.00| Stream #5 Added to: Stream #2| 10.5 16.8|
16.967 | | |
+-----+
+-----+
| 225.00 225.00| Zero Out: Stream #5| 6.3 0.0|
|
| 225.00 225.00| View: Stream #2| 16.8|
16.967 | 17.77| 3 |
+-----+
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT
INTERVAL
|
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
|
| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS
GREATER THAN 1 SQ MI
|
+-----+
+-----+

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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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED B *
* SMALL AREA HYDROGRAPH - COMPLEX MODEL *
* 10-YR EV JULY 2022 ROKAMOTO *

FILE NAME: 3B10EVC.DAT
TIME/DATE OF STUDY: 14:10 07/15/2022

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 210.00 TO NODE 230.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 213.70
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.128
LOW LOSS FRACTION = 0.388
TIME OF CONCENTRATION (MIN.) = 20.59
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 5
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.26
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.59
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.78
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.31
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.81
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.03

FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2

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

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

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-10 showing basin data.

FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	1.84	0.260
3	2.00	3.22	1.160
4	3.00	4.16	2.520
5	4.00	4.94	3.990
6	5.00	5.60	5.550
7	6.00	7.17	7.200
8	7.00	14.13	8.950
9	8.00	18.54	10.800
10	9.00	21.90	12.740
11	10.00	24.73	14.780
12	11.00	37.17	16.920
13	12.00	57.63	19.160
14	13.00	83.32	21.500
15	14.00	112.96	23.940
16	15.00	133.28	26.480
17	16.00	144.34	29.150
18	17.00	154.45	31.950
19	18.00	163.94	34.870
20	19.00	172.92	37.940
21	20.00	181.39	41.140
22	21.00	189.45	44.500
23	22.00	197.22	48.010
24	23.00	466.70	51.740
25	24.00	951.81	53.820

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 7

>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 6

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 11

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

=====

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+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3B10EVC.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 |
+-----+
| 210.00 230.00| Subarea (UH) Added to Stream #2| 0.0 253.8|
16.350 | | 4 |
| 221.00 221.00| Flowby Basin Model: Stream #2| 253.8 28.5|
16.350 | | |
| 221.00 223.00| Flow-Through Basin: Stream #2| 28.5 15.4|
16.667 | 3.93| |
| 221.00 222.00| Flow-Through Basin: Stream #5| 225.3 20.0|
16.867 | 11.66| |
| 225.00 225.00| Stream #5 Added to: Stream #2| 15.4 35.4|
16.733 | | |
+-----+
| 225.00 225.00| Zero Out: Stream #5| 20.0 0.0|
|
| 225.00 225.00| View: Stream #2| 35.4|
16.733 | 29.97| 3 |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS
GREATER THAN 1 SQ MI
|
+-----+

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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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED B *
* SMALL AREA HYDROGRAPH - COMPLEX MODEL *
* 25-YR EV SEPT 2022 ROKAMOTO *

FILE NAME: 3B25EVC.DAT
TIME/DATE OF STUDY: 07:39 09/18/2022

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 210.00 TO NODE 221.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 213.70
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.128
LOW LOSS FRACTION = 0.356
TIME OF CONCENTRATION (MIN.) = 19.82
ORANGE COUNTY "VALLEY" RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 10
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.34
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.72
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.95
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.59
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.20
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.68

FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2

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

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

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-10 showing basin data.

FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	1.84	0.260
3	2.00	3.22	1.160
4	3.00	4.16	2.520
5	4.00	4.94	3.990
6	5.00	5.60	5.550
7	6.00	7.17	7.200
8	7.00	14.13	8.950
9	8.00	18.54	10.800
10	9.00	21.90	12.740
11	10.00	24.73	14.780
12	11.00	37.17	16.920
13	12.00	57.63	19.160
14	13.00	83.32	21.500
15	14.00	112.96	23.940
16	15.00	133.28	26.480
17	16.00	144.34	29.150
18	17.00	154.45	31.950
19	18.00	163.94	34.870
20	19.00	172.92	37.940
21	20.00	181.39	41.140
22	21.00	189.45	44.500
23	22.00	197.22	48.010
24	23.00	466.70	51.740
25	24.00	951.81	53.820

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 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 7

>>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 6

>>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<<

=====

 FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 11

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

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+-----+
|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3B25EVC.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 |
+-----+
+-----+
| 210.00 221.00| Subarea (UH) Added to Stream #2| 0.0 327.8|
16.333 | | 4 |
| 221.00 221.00| Flowby Basin Model: Stream #2| 327.8 33.3|
16.333 | | |
| 221.00 223.00| Flow-Through Basin: Stream #2| 33.3 17.2|
16.633 | 4.21| |
| 221.00 222.00| Flow-Through Basin: Stream #5| 294.5 30.2|
16.850 | 15.72| |
| 225.00 225.00| Stream #5 Added to: Stream #2| 17.2 47.3|
16.817 | | |
+-----+
+-----+
| 225.00 225.00| Zero Out: Stream #5| 30.2 0.0|
|
| 225.00 225.00| View: Stream #2| 47.3|
16.817 | 38.87| 3 |
+-----+
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT
INTERVAL
|
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
|
| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS
GREATER THAN 1 SQ MI
|
+-----+
+-----+

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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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED B *
* SMALL AREA HYDROGRAPH - COMPLEX MODEL *
* 50-YR EV JULY 2022 ROKAMOTO *

FILE NAME: 3B50EVC.DAT
TIME/DATE OF STUDY: 14:33 07/15/2022

The Small Area Unit Hydrograph Procedures in Section J
of the Hydrology Manual provides estimates of runoff
hydrograph and runoff volume for watersheds whose time of
concentration is less than 25 minutes. The PROGRAM User
should check the applicability of using the small area unit
hydrograph procedures, and follow the guidelines in
Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 210.00 TO NODE 231.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 213.70
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.128
LOW LOSS FRACTION = 0.337
TIME OF CONCENTRATION (MIN.) = 17.08
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 50
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.37
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.80
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.06
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.78
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.47
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.12

FLOW PROCESS FROM NODE 221.00 TO NODE 221.00 IS CODE = 2

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

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

Table with 3 columns: DATA PAIR NUMBER, Qcenter (CFS), Qpass (CFS). Rows 1-5 showing flow data.

FLOW EXCESS IS ASSUMED TO BE ADDED TO STREAM NUMBER 5

FLOW PROCESS FROM NODE 221.00 TO NODE 223.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 2
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 2.070
SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

Table with 4 columns: INTERVAL NUMBER, DEPTH (FT), OUTFLOW (CFS), STORAGE (AF). Rows 1-10 showing basin data.

FLOW PROCESS FROM NODE 221.00 TO NODE 222.00 IS CODE = 3.2

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #5<<<<

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 5
THROUGH A FLOW-THROUGH DETENTION BASIN.
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
DEAD STORAGE (AF) = 0.000

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	1.84	0.260
3	2.00	3.22	1.160
4	3.00	4.16	2.520
5	4.00	4.94	3.990
6	5.00	5.60	5.550
7	6.00	7.17	7.200
8	7.00	14.13	8.950
9	8.00	18.54	10.800
10	9.00	21.90	12.740
11	10.00	24.73	14.780
12	11.00	37.17	16.920
13	12.00	57.63	19.160
14	13.00	83.32	21.500
15	14.00	112.96	23.940
16	15.00	133.28	26.480
17	16.00	144.34	29.150
18	17.00	154.45	31.950
19	18.00	163.94	34.870
20	19.00	172.92	37.940
21	20.00	181.39	41.140
22	21.00	189.45	44.500
23	22.00	197.22	48.010
24	23.00	466.70	51.740
25	24.00	951.81	53.820

=====

FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 7

 >>>>STREAM NUMBER 5 ADDED TO STREAM NUMBER 2<<<<<

=====

FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 6

 >>>>STREAM NUMBER 5 CLEARED AND SET TO ZERO<<<<<

=====

FLOW PROCESS FROM NODE 225.00 TO NODE 225.00 IS CODE = 11

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

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|
| * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
| INPUT FILENAME: [3B50EVC.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 |
+-----+
| 210.00 231.00| Subarea (UH) Added to Stream #2| 0.0 399.5|
16.300 | | 4 |
| 221.00 221.00| Flowby Basin Model: Stream #2| 399.5 37.9|
16.300 | | |
| 221.00 223.00| Flow-Through Basin: Stream #2| 37.9 17.8|
16.550 | 4.37| |
| 221.00 222.00| Flow-Through Basin: Stream #5| 361.6 49.5|
16.583 | 18.27| |
| 225.00 225.00| Stream #5 Added to: Stream #2| 17.8 67.4|
16.583 | | |
+-----+
| 225.00 225.00| Zero Out: Stream #5| 49.5 0.0|
| | |
| 225.00 225.00| View: Stream #2| 67.4|
16.583 | 45.08| 3 |
+-----+
|Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT
INTERVAL
| 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM
| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS
GREATER THAN 1 SQ MI
|
+-----+

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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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED C *
* UNIT HYDROGRAPH - COMPLEX MODEL - SINGLE BASIN *
* 100-YR EV APRIL 2023 ROKAMOTO *

FILE NAME: 3C00EVC.DAT
TIME/DATE OF STUDY: 12:24 04/29/2023

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 712.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.292 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.100
LOW LOSS FRACTION = 0.239
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.40
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.87
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.15
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.94
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.71
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.49

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 28.539

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.758	151.512
2	9.845	696.888
3	26.589	1443.033
4	48.951	1927.198
5	71.184	1915.979
6	84.962	1187.393
7	92.335	635.450
8	96.276	339.592
9	98.095	156.820
10	98.677	50.144
11	99.212	46.117
12	99.685	40.728
13	99.921	20.364
14	100.000	6.788

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 53.3394
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 212.4897

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	325.0	650.0	975.0	1300.0
0.083	0.0045	0.66	Q	.	.	.	.
0.167	0.0298	3.67	Q	.	.	.	.
0.250	0.0982	9.93	Q	.	.	.	.
0.333	0.2243	18.30	Q	.	.	.	.
0.417	0.4079	26.66	Q	.	.	.	.
0.500	0.6274	31.88	Q	.	.	.	.
0.583	0.8667	34.74	VQ	.	.	.	.
0.667	1.1168	36.32	VQ	.	.	.	.
0.750	1.3725	37.12	VQ	.	.	.	.
0.833	1.6305	37.47	VQ	.	.	.	.
0.917	1.8908	37.80	VQ	.	.	.	.
1.000	2.1532	38.10	VQ	.	.	.	.
1.083	2.4172	38.32	VQ	.	.	.	.
1.167	2.6822	38.48	VQ	.	.	.	.
1.250	2.9482	38.62	VQ	.	.	.	.
1.333	3.2151	38.75	VQ	.	.	.	.
1.417	3.4829	38.89	VQ	.	.	.	.
1.500	3.7517	39.03	VQ	.	.	.	.
1.583	4.0215	39.17	VQ	.	.	.	.
1.667	4.2922	39.31	VQ	.	.	.	.
1.750	4.5639	39.45	VQ	.	.	.	.
1.833	4.8366	39.59	VQ	.	.	.	.
1.917	5.1103	39.74	VQ	.	.	.	.
2.000	5.3850	39.89	.Q	.	.	.	.
2.083	5.6607	40.03	.Q	.	.	.	.
2.167	5.9374	40.18	.Q	.	.	.	.
2.250	6.2152	40.33	.Q	.	.	.	.
2.333	6.4940	40.48	.Q	.	.	.	.
2.417	6.7739	40.64	.Q	.	.	.	.
2.500	7.0548	40.79	.Q	.	.	.	.
2.583	7.3368	40.95	.Q	.	.	.	.
2.667	7.6199	41.11	.Q	.	.	.	.
2.750	7.9041	41.27	.Q	.	.	.	.
2.833	8.1894	41.43	.Q	.	.	.	.
2.917	8.4759	41.59	.Q	.	.	.	.
3.000	8.7634	41.75	.Q	.	.	.	.
3.083	9.0521	41.92	.Q	.	.	.	.
3.167	9.3419	42.08	.Q	.	.	.	.
3.250	9.6329	42.25	.Q	.	.	.	.
3.333	9.9251	42.43	.Q	.	.	.	.
3.417	10.2185	42.60	.Q	.	.	.	.
3.500	10.5131	42.77	.Q	.	.	.	.
3.583	10.8089	42.95	.QV	.	.	.	.
3.667	11.1059	43.13	.QV	.	.	.	.
3.750	11.4042	43.31	.QV	.	.	.	.
3.833	11.7037	43.49	.QV	.	.	.	.
3.917	12.0045	43.68	.QV	.	.	.	.

4.000	12.3066	43.86	.QV	.	.	.	.
4.083	12.6100	44.05	.QV	.	.	.	.
4.167	12.9147	44.24	.QV	.	.	.	.
4.250	13.2207	44.43	.QV	.	.	.	.
4.333	13.5281	44.63	.QV	.	.	.	.
4.417	13.8368	44.83	.QV	.	.	.	.
4.500	14.1469	45.02	.QV	.	.	.	.
4.583	14.4584	45.23	.QV	.	.	.	.
4.667	14.7712	45.43	.QV	.	.	.	.
4.750	15.0855	45.64	.QV	.	.	.	.
4.833	15.4013	45.85	.QV	.	.	.	.
4.917	15.7185	46.06	.QV	.	.	.	.
5.000	16.0372	46.27	.Q V	.	.	.	.
5.083	16.3573	46.49	.Q V	.	.	.	.
5.167	16.6790	46.71	.Q V	.	.	.	.
5.250	17.0022	46.93	.Q V	.	.	.	.
5.333	17.3269	47.15	.Q V	.	.	.	.
5.417	17.6532	47.38	.Q V	.	.	.	.
5.500	17.9811	47.61	.Q V	.	.	.	.
5.583	18.3106	47.84	.Q V	.	.	.	.
5.667	18.6417	48.08	.Q V	.	.	.	.
5.750	18.9745	48.32	.Q V	.	.	.	.
5.833	19.3089	48.56	.Q V	.	.	.	.
5.917	19.6451	48.80	.Q V	.	.	.	.
6.000	19.9829	49.05	.Q V	.	.	.	.
6.083	20.3224	49.30	.Q V	.	.	.	.
6.167	20.6638	49.56	.Q V	.	.	.	.
6.250	21.0069	49.82	.Q V	.	.	.	.
6.333	21.3518	50.08	.Q V	.	.	.	.
6.417	21.6985	50.35	.Q V	.	.	.	.
6.500	22.0471	50.61	.Q V	.	.	.	.
6.583	22.3975	50.89	.Q V	.	.	.	.
6.667	22.7499	51.16	.Q V	.	.	.	.
6.750	23.1042	51.45	.Q V	.	.	.	.
6.833	23.4605	51.73	.Q V	.	.	.	.
6.917	23.8187	52.02	.Q V	.	.	.	.
7.000	24.1790	52.31	.Q V	.	.	.	.
7.083	24.5413	52.61	.Q V	.	.	.	.
7.167	24.9057	52.91	.Q V	.	.	.	.
7.250	25.2722	53.22	.Q V	.	.	.	.
7.333	25.6408	53.53	.Q V	.	.	.	.
7.417	26.0116	53.84	.Q V	.	.	.	.
7.500	26.3846	54.16	.Q V	.	.	.	.
7.583	26.7599	54.49	.Q V	.	.	.	.
7.667	27.1374	54.82	.Q V	.	.	.	.
7.750	27.5173	55.15	.Q V	.	.	.	.
7.833	27.8995	55.49	.Q V	.	.	.	.
7.917	28.2840	55.84	.Q V	.	.	.	.
8.000	28.6710	56.19	.Q V	.	.	.	.
8.083	29.0605	56.55	.Q V	.	.	.	.
8.167	29.4524	56.91	.Q V	.	.	.	.
8.250	29.8470	57.28	.Q V	.	.	.	.
8.333	30.2440	57.66	.Q V	.	.	.	.
8.417	30.6438	58.04	.Q V	.	.	.	.
8.500	31.0462	58.43	.Q V	.	.	.	.
8.583	31.4513	58.83	.Q V	.	.	.	.
8.667	31.8592	59.23	.Q V	.	.	.	.
8.750	32.2700	59.64	.Q V	.	.	.	.

8.833	32.6836	60.06	.Q	V	.	.	.	.
8.917	33.1001	60.48	.Q	V	.	.	.	.
9.000	33.5196	60.91	.Q	V	.	.	.	.
9.083	33.9422	61.36	.Q	V	.	.	.	.
9.167	34.3678	61.80	.Q	V	.	.	.	.
9.250	34.7966	62.26	.Q	V	.	.	.	.
9.333	35.2286	62.73	.Q	V	.	.	.	.
9.417	35.6639	63.20	.Q	V	.	.	.	.
9.500	36.1025	63.69	.Q	V	.	.	.	.
9.583	36.5446	64.19	.Q	V	.	.	.	.
9.667	36.9901	64.69	.Q	V	.	.	.	.
9.750	37.4392	65.21	.Q	V	.	.	.	.
9.833	37.8918	65.73	.Q	V	.	.	.	.
9.917	38.3482	66.27	.Q	V	.	.	.	.
10.000	38.8084	66.81	.Q	V	.	.	.	.
10.083	39.2724	67.38	.Q	V	.	.	.	.
10.167	39.7404	67.95	.Q	V	.	.	.	.
10.250	40.2124	68.54	.Q	V	.	.	.	.
10.333	40.6885	69.13	.Q	V	.	.	.	.
10.417	41.1688	69.75	.Q	V	.	.	.	.
10.500	41.6535	70.37	.Q	V	.	.	.	.
10.583	42.1426	71.01	.Q	V	.	.	.	.
10.667	42.6361	71.67	.Q	V	.	.	.	.
10.750	43.1344	72.34	.Q	V	.	.	.	.
10.833	43.6373	73.03	.Q	V	.	.	.	.
10.917	44.1451	73.74	.Q	V	.	.	.	.
11.000	44.6579	74.46	.Q	V	.	.	.	.
11.083	45.1759	75.20	.Q	V	.	.	.	.
11.167	45.6990	75.96	.Q	V	.	.	.	.
11.250	46.2276	76.75	.Q	V	.	.	.	.
11.333	46.7616	77.55	.Q	V	.	.	.	.
11.417	47.3014	78.37	.Q	V	.	.	.	.
11.500	47.8470	79.22	.Q	V	.	.	.	.
11.583	48.3986	80.10	.Q	V	.	.	.	.
11.667	48.9564	80.99	.Q	V	.	.	.	.
11.750	49.5206	81.92	.Q	V	.	.	.	.
11.833	50.0912	82.86	.Q	V	.	.	.	.
11.917	50.6687	83.85	.Q	V	.	.	.	.
12.000	51.2531	84.85	.Q	V	.	.	.	.
12.083	51.8484	86.43	.Q	V	.	.	.	.
12.167	52.4679	89.96	.Q	V	.	.	.	.
12.250	53.1301	96.15	.Q	V	.	.	.	.
12.333	53.8469	104.09	.Q	V	.	.	.	.
12.417	54.6187	112.05	.Q	V	.	.	.	.
12.500	55.4280	117.51	.Q	V	.	.	.	.
12.583	56.2620	121.10	.Q	V	.	.	.	.
12.667	57.1138	123.69	.Q	V	.	.	.	.
12.750	57.9796	125.71	.Q	V	.	.	.	.
12.833	58.8569	127.39	.Q	.V	.	.	.	.
12.917	59.7462	129.12	.Q	.V	.	.	.	.
13.000	60.6476	130.89	.Q	.V	.	.	.	.
13.083	61.5612	132.65	.Q	.V	.	.	.	.
13.167	62.4870	134.42	.Q	.V	.	.	.	.
13.250	63.4254	136.26	.Q	.V	.	.	.	.
13.333	64.3769	138.15	.Q	.V	.	.	.	.
13.417	65.3420	140.14	.Q	.V	.	.	.	.
13.500	66.3214	142.20	.Q	.V	.	.	.	.
13.583	67.3157	144.37	.Q	.V	.	.	.	.

13.667	68.3255	146.63	.Q	.V	.	.	.	.
13.750	69.3517	149.01	.Q	.V	.	.	.	.
13.833	70.3950	151.48	.Q	.V	.	.	.	.
13.917	71.4564	154.11	.Q	.V	.	.	.	.
14.000	72.5367	156.85	.Q	.V	.	.	.	.
14.083	73.6384	159.98	.Q	.V	.	.	.	.
14.167	74.7679	163.99	.Q	.V	.	.	.	.
14.250	75.9334	169.23	.Q	.V	.	.	.	.
14.333	77.1407	175.31	.Q	.V	.	.	.	.
14.417	78.3915	181.61	.Q	.V	.	.	.	.
14.500	79.6803	187.13	.Q	.V	.	.	.	.
14.583	81.0040	192.20	.Q	.V	.	.	.	.
14.667	82.3616	197.13	.Q	.V	.	.	.	.
14.750	83.7542	202.19	.Q	.V	.	.	.	.
14.833	85.1829	207.46	.Q	.V	.	.	.	.
14.917	86.6517	213.27	.Q	.V	.	.	.	.
15.000	88.1654	219.79	.Q	.V	.	.	.	.
15.083	89.7315	227.40	.Q	.V	.	.	.	.
15.167	91.3588	236.28	.Q	.V	.	.	.	.
15.250	93.0581	246.73	.Q	.V	.	.	.	.
15.333	94.8394	258.65	.Q	.V	.	.	.	.
15.417	96.7042	270.78	.Q	.V	.	.	.	.
15.500	98.6255	278.97	.Q	.V	.	.	.	.
15.583	100.5663	281.81	.Q	.V	.	.	.	.
15.667	102.5129	282.64	.Q	.V	.	.	.	.
15.750	104.5049	289.23	.Q	.V	.	.	.	.
15.833	106.6611	313.09	.Q	.V	.	.	.	.
15.917	109.1326	358.86	.Q	.V	.	.	.	.
16.000	112.1221	434.07	.Q	.V	.	.	.	.
16.083	116.1474	584.47	.	.Q	.V	.	.	.
16.167	121.9951	849.09	.	.	.V	.Q	.	.
16.250	129.7855	1131.16	.	.	.	.V	.Q	.
16.333	138.4857	1263.28	.	.	.	.V	.Q	.Q
16.417	146.5946	1177.41	.	.	.	.V	.Q	.
16.500	152.5630	866.61	.	.	.	.Q	.V	.
16.583	156.8047	615.89	.	.	.Q	.	.V	.
16.667	160.0000	463.96	.	.Q	.	.	.V	.
16.750	162.5317	367.60	.	.Q	.	.	.V	.
16.833	164.6310	304.82	.	.Q	.	.	.V	.
16.917	166.5407	277.30	.	.Q	.	.	.V	.
17.000	168.2931	254.44	.	.Q	.	.	.V	.
17.083	169.8821	230.72	.	.Q	.	.	.V	.
17.167	171.3366	211.19	.	.Q	.	.	.V	.
17.250	172.6854	195.85	.	.Q	.	.	.V	.
17.333	173.9525	183.97	.	.Q	.	.	.V	.
17.417	175.1473	173.48	.	.Q	.	.	.V	.
17.500	176.2832	164.93	.	.Q	.	.	.V	.
17.583	177.3707	157.90	.Q	.	.	.	.V	.
17.667	178.4172	151.96	.Q	.	.	.	.V	.
17.750	179.4283	146.81	.Q	.	.	.	.V	.
17.833	180.4082	142.28	.Q	.	.	.	.V	.
17.917	181.3595	138.13	.Q	.	.	.	.V	.
18.000	182.2847	134.33	.Q	.	.	.	.V	.
18.083	183.1821	130.31	.Q	.	.	.	.V	.
18.167	184.0407	124.66	.Q	.	.	.	.V	.
18.250	184.8439	116.64	.Q	.	.	.	.V	.
18.333	185.5819	107.15	.Q	.	.	.	.V	.
18.417	186.2562	97.92	.Q	.	.	.	.V	.

18.500	186.8860	91.44	.Q	.	.	.	V	.
18.583	187.4856	87.06	.Q	.	.	.	V	.
18.667	188.0632	83.87	.Q	.	.	.	V	.
18.750	188.6240	81.44	.Q	.	.	.	V	.
18.833	189.1715	79.49	.Q	.	.	.	V	.
18.917	189.7063	77.66	.Q	.	.	.	V	.
19.000	190.2292	75.93	.Q	.	.	.	V	.
19.083	190.7413	74.36	.Q	.	.	.	V	.
19.167	191.2434	72.90	.Q	.	.	.	V	.
19.250	191.7361	71.55	.Q	.	.	.	V	.
19.333	192.2200	70.25	.Q	.	.	.	V	.
19.417	192.6953	69.02	.Q	.	.	.	V	.
19.500	193.1625	67.84	.Q	.	.	.	V	.
19.583	193.6219	66.71	.Q	.	.	.	V	.
19.667	194.0738	65.62	.Q	.	.	.	V	.
19.750	194.5186	64.58	.Q	.	.	.	V	.
19.833	194.9565	63.59	.Q	.	.	.	V	.
19.917	195.3879	62.63	.Q	.	.	.	V	.
20.000	195.8129	61.71	.Q	.	.	.	V	.
20.083	196.2317	60.82	.Q	.	.	.	V	.
20.167	196.6447	59.96	.Q	.	.	.	V	.
20.250	197.0520	59.14	.Q	.	.	.	V	.
20.333	197.4538	58.34	.Q	.	.	.	V	.
20.417	197.8503	57.57	.Q	.	.	.	V	.
20.500	198.2417	56.83	.Q	.	.	.	V	.
20.583	198.6282	56.11	.Q	.	.	.	V	.
20.667	199.0098	55.41	.Q	.	.	.	V	.
20.750	199.3868	54.74	.Q	.	.	.	V	.
20.833	199.7593	54.09	.Q	.	.	.	V	.
20.917	200.1274	53.45	.Q	.	.	.	V	.
21.000	200.4913	52.84	.Q	.	.	.	V	.
21.083	200.8511	52.24	.Q	.	.	.	V	.
21.167	201.2069	51.66	.Q	.	.	.	V	.
21.250	201.5588	51.10	.Q	.	.	.	V	.
21.333	201.9069	50.55	.Q	.	.	.	V	.
21.417	202.2514	50.01	.Q	.	.	.	V	.
21.500	202.5922	49.50	.Q	.	.	.	V	.
21.583	202.9296	48.99	.Q	.	.	.	V	.
21.667	203.2636	48.50	.Q	.	.	.	V	.
21.750	203.5943	48.02	.Q	.	.	.	V	.
21.833	203.9218	47.55	.Q	.	.	.	V	.
21.917	204.2462	47.09	.Q	.	.	.	V	.
22.000	204.5674	46.65	.Q	.	.	.	V	.
22.083	204.8857	46.21	.Q	.	.	.	V	.
22.167	205.2011	45.79	.Q	.	.	.	V	.
22.250	205.5136	45.38	.Q	.	.	.	V	.
22.333	205.8233	44.97	.Q	.	.	.	V	.
22.417	206.1303	44.58	.Q	.	.	.	V	.
22.500	206.4347	44.19	.Q	.	.	.	V	.
22.583	206.7364	43.81	.Q	.	.	.	V	.
22.667	207.0356	43.44	.Q	.	.	.	V	.
22.750	207.3323	43.08	.Q	.	.	.	V	.
22.833	207.6266	42.73	.Q	.	.	.	V	.
22.917	207.9184	42.38	.Q	.	.	.	V	.
23.000	208.2080	42.04	.Q	.	.	.	V	.
23.083	208.4952	41.71	.Q	.	.	.	V	.
23.167	208.7802	41.38	.Q	.	.	.	V	.
23.250	209.0630	41.06	.Q	.	.	.	V	.

23.333	209.3436	40.75	.Q	.	.	.	V	.
23.417	209.6221	40.44	.Q	.	.	.	V	.
23.500	209.8986	40.14	.Q	.	.	.	V	.
23.583	210.1730	39.84	.Q	.	.	.	V	.
23.667	210.4454	39.55	.Q	.	.	.	V	.
23.750	210.7159	39.27	.Q	.	.	.	V	.
23.833	210.9844	38.99	.Q	.	.	.	V	.
23.917	211.2511	38.72	.Q	.	.	.	V	.
24.000	211.5159	38.45	.Q	.	.	.	V	.
24.083	211.7743	37.53	.Q	.	.	.	V	.
24.167	212.0103	34.26	.Q	.	.	.	V	.
24.250	212.2018	27.80	Q	.	.	.	V	.
24.333	212.3346	19.29	Q	.	.	.	V	.
24.417	212.4095	10.88	Q	.	.	.	V	.
24.500	212.4486	5.68	Q	.	.	.	V	.
24.583	212.4685	2.89	Q	.	.	.	V	.
24.667	212.4782	1.41	Q	.	.	.	V	.
24.750	212.4832	0.72	Q	.	.	.	V	.
24.833	212.4866	0.50	Q	.	.	.	V	.
24.917	212.4886	0.30	Q	.	.	.	V	.
25.000	212.4894	0.12	Q	.	.	.	V	.
25.083	212.4896	0.03	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:

(Note: 100% of Peak Flow Rate estimate assumed to have an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1505.0
10%	320.0
20%	105.0
30%	45.0
40%	35.0
50%	25.0
60%	25.0
70%	15.0
80%	15.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

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(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 462.500 ACRES

BASEFLOW = 0.000 CFS/SQUARE-MILE

*USER ENTERED "LAG" TIME = 0.248 HOURS

CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.

THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)

MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY (DEVELOPED) S-GRAPH SELECTED

MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.135

LOW LOSS FRACTION = 0.311
 HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.40
 SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 0.87
 SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.15
 SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 1.94
 SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 2.71
 SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 4.49

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
 30-MINUTE FACTOR = 0.942
 1-HOUR FACTOR = 0.942
 3-HOUR FACTOR = 0.991
 6-HOUR FACTOR = 0.996
 24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
 UNIT INTERVAL PERCENTAGE OF LAG-TIME = 33.602

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	2.196	122.842
2	13.819	650.119
3	35.960	1238.397
4	63.423	1536.105
5	82.693	1077.869
6	92.158	529.375
7	96.654	251.507
8	98.319	93.124
9	98.949	35.238
10	99.461	28.623
11	99.784	18.097
12	99.946	9.048
13	100.000	3.016

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 45.3874
 TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 127.1497

24 - HOUR STORM
 RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	225.0	450.0	675.0	900.0
0.083	0.0033	0.48	Q	.	.	.	.
0.167	0.0242	3.03	Q	.	.	.	.
0.250	0.0786	7.89	Q	.	.	.	.
0.333	0.1745	13.94	Q	.	.	.	.
0.417	0.2999	18.21	Q	.	.	.	.
0.500	0.4400	20.34	Q	.	.	.	.
0.583	0.5873	21.39	Q	.	.	.	.
0.667	0.7377	21.83	Q	.	.	.	.
0.750	0.8895	22.04	Q	.	.	.	.
0.833	1.0426	22.23	Q	.	.	.	.
0.917	1.1967	22.38	Q	.	.	.	.
1.000	1.3516	22.49	Q	.	.	.	.
1.083	1.5071	22.58	VQ	.	.	.	.
1.167	1.6631	22.66	VQ	.	.	.	.
1.250	1.8197	22.74	VQ	.	.	.	.
1.333	1.9769	22.82	VQ	.	.	.	.
1.417	2.1346	22.90	VQ	.	.	.	.
1.500	2.2928	22.98	VQ	.	.	.	.
1.583	2.4517	23.06	VQ	.	.	.	.
1.667	2.6111	23.15	VQ	.	.	.	.
1.750	2.7710	23.23	VQ	.	.	.	.
1.833	2.9316	23.31	VQ	.	.	.	.
1.917	3.0928	23.40	VQ	.	.	.	.
2.000	3.2545	23.49	.Q	.	.	.	.
2.083	3.4169	23.57	.Q	.	.	.	.
2.167	3.5798	23.66	.Q	.	.	.	.
2.250	3.7434	23.75	.Q	.	.	.	.
2.333	3.9076	23.84	.Q	.	.	.	.
2.417	4.0724	23.93	.Q	.	.	.	.
2.500	4.2378	24.02	.Q	.	.	.	.
2.583	4.4039	24.11	.Q	.	.	.	.
2.667	4.5706	24.21	.Q	.	.	.	.
2.750	4.7379	24.30	.Q	.	.	.	.
2.833	4.9060	24.40	.Q	.	.	.	.
2.917	5.0746	24.49	.Q	.	.	.	.
3.000	5.2440	24.59	.Q	.	.	.	.
3.083	5.4140	24.69	.Q	.	.	.	.
3.167	5.5847	24.79	.Q	.	.	.	.
3.250	5.7561	24.89	.Q	.	.	.	.
3.333	5.9282	24.99	.Q	.	.	.	.
3.417	6.1009	25.09	.Q	.	.	.	.
3.500	6.2745	25.19	.Q	.	.	.	.
3.583	6.4487	25.30	.QV	.	.	.	.
3.667	6.6236	25.40	.QV	.	.	.	.
3.750	6.7993	25.51	.QV	.	.	.	.
3.833	6.9757	25.62	.QV	.	.	.	.
3.917	7.1529	25.73	.QV	.	.	.	.

4.000	7.3308	25.84	.QV	.	.	.	.
4.083	7.5095	25.95	.QV	.	.	.	.
4.167	7.6890	26.06	.QV	.	.	.	.
4.250	7.8693	26.17	.QV	.	.	.	.
4.333	8.0503	26.29	.QV	.	.	.	.
4.417	8.2322	26.40	.QV	.	.	.	.
4.500	8.4148	26.52	.QV	.	.	.	.
4.583	8.5983	26.64	.QV	.	.	.	.
4.667	8.7826	26.76	.QV	.	.	.	.
4.750	8.9678	26.89	.QV	.	.	.	.
4.833	9.1538	27.01	.QV	.	.	.	.
4.917	9.3407	27.13	.QV	.	.	.	.
5.000	9.5284	27.26	.QV	.	.	.	.
5.083	9.7171	27.39	.Q V	.	.	.	.
5.167	9.9066	27.52	.Q V	.	.	.	.
5.250	10.0970	27.65	.Q V	.	.	.	.
5.333	10.2883	27.78	.Q V	.	.	.	.
5.417	10.4806	27.92	.Q V	.	.	.	.
5.500	10.6738	28.05	.Q V	.	.	.	.
5.583	10.8679	28.19	.Q V	.	.	.	.
5.667	11.0630	28.33	.Q V	.	.	.	.
5.750	11.2591	28.47	.Q V	.	.	.	.
5.833	11.4562	28.61	.Q V	.	.	.	.
5.917	11.6543	28.76	.Q V	.	.	.	.
6.000	11.8533	28.91	.Q V	.	.	.	.
6.083	12.0534	29.05	.Q V	.	.	.	.
6.167	12.2546	29.21	.Q V	.	.	.	.
6.250	12.4568	29.36	.Q V	.	.	.	.
6.333	12.6600	29.51	.Q V	.	.	.	.
6.417	12.8644	29.67	.Q V	.	.	.	.
6.500	13.0698	29.83	.Q V	.	.	.	.
6.583	13.2764	29.99	.Q V	.	.	.	.
6.667	13.4841	30.16	.Q V	.	.	.	.
6.750	13.6929	30.32	.Q V	.	.	.	.
6.833	13.9029	30.49	.Q V	.	.	.	.
6.917	14.1141	30.66	.Q V	.	.	.	.
7.000	14.3264	30.84	.Q V	.	.	.	.
7.083	14.5400	31.01	.Q V	.	.	.	.
7.167	14.7548	31.19	.Q V	.	.	.	.
7.250	14.9709	31.37	.Q V	.	.	.	.
7.333	15.1882	31.56	.Q V	.	.	.	.
7.417	15.4068	31.74	.Q V	.	.	.	.
7.500	15.6267	31.93	.Q V	.	.	.	.
7.583	15.8479	32.12	.Q V	.	.	.	.
7.667	16.0705	32.32	.Q V	.	.	.	.
7.750	16.2945	32.52	.Q V	.	.	.	.
7.833	16.5199	32.72	.Q V	.	.	.	.
7.917	16.7466	32.93	.Q V	.	.	.	.
8.000	16.9748	33.14	.Q V	.	.	.	.
8.083	17.2045	33.35	.Q V	.	.	.	.
8.167	17.4356	33.56	.Q V	.	.	.	.
8.250	17.6683	33.78	.Q V	.	.	.	.
8.333	17.9025	34.01	.Q V	.	.	.	.
8.417	18.1382	34.23	.Q V	.	.	.	.
8.500	18.3756	34.46	.Q V	.	.	.	.
8.583	18.6145	34.70	.Q V	.	.	.	.
8.667	18.8552	34.94	.Q V	.	.	.	.
8.750	19.0974	35.18	.Q V	.	.	.	.

8.833	19.3414	35.43	.Q	V	.	.	.
8.917	19.5872	35.68	.Q	V	.	.	.
9.000	19.8347	35.94	.Q	V	.	.	.
9.083	20.0839	36.20	.Q	V	.	.	.
9.167	20.3351	36.47	.Q	V	.	.	.
9.250	20.5881	36.74	.Q	V	.	.	.
9.333	20.8430	37.01	.Q	V	.	.	.
9.417	21.0999	37.30	.Q	V	.	.	.
9.500	21.3587	37.59	.Q	V	.	.	.
9.583	21.6196	37.88	.Q	V	.	.	.
9.667	21.8825	38.18	.Q	V	.	.	.
9.750	22.1476	38.48	.Q	V	.	.	.
9.833	22.4148	38.80	.Q	V	.	.	.
9.917	22.6842	39.12	.Q	V	.	.	.
10.000	22.9558	39.44	.Q	V	.	.	.
10.083	23.2297	39.77	.Q	V	.	.	.
10.167	23.5060	40.12	.Q	V	.	.	.
10.250	23.7847	40.46	.Q	V	.	.	.
10.333	24.0658	40.82	.Q	V	.	.	.
10.417	24.3495	41.18	.Q	V	.	.	.
10.500	24.6357	41.56	.Q	V	.	.	.
10.583	24.9245	41.94	.Q	V	.	.	.
10.667	25.2160	42.33	.Q	V	.	.	.
10.750	25.5103	42.73	.Q	V	.	.	.
10.833	25.8074	43.14	.Q	V	.	.	.
10.917	26.1074	43.56	.Q	V	.	.	.
11.000	26.4104	43.99	.Q	V	.	.	.
11.083	26.7164	44.43	.Q	V	.	.	.
11.167	27.0256	44.89	.Q	V	.	.	.
11.250	27.3379	45.35	.Q	V	.	.	.
11.333	27.6536	45.83	.Q	V	.	.	.
11.417	27.9726	46.32	.Q	V	.	.	.
11.500	28.2951	46.83	.Q	V	.	.	.
11.583	28.6212	47.35	.Q	V	.	.	.
11.667	28.9510	47.89	.Q	V	.	.	.
11.750	29.2846	48.44	.Q	V	.	.	.
11.833	29.6221	49.01	.Q	V	.	.	.
11.917	29.9636	49.59	.Q	V	.	.	.
12.000	30.3094	50.20	.Q	V	.	.	.
12.083	30.6620	51.21	.Q	V	.	.	.
12.167	31.0334	53.92	.Q	V	.	.	.
12.250	31.4365	58.53	.Q	V	.	.	.
12.333	31.8781	64.12	.Q	V	.	.	.
12.417	32.3485	68.29	.Q	V	.	.	.
12.500	32.8358	70.76	.Q	V	.	.	.
12.583	33.3342	72.37	.Q	V	.	.	.
12.667	33.8405	73.51	.Q	V	.	.	.
12.750	34.3535	74.49	.Q	V	.	.	.
12.833	34.8734	75.50	.Q	V	.	.	.
12.917	35.4002	76.49	.Q	.V	.	.	.
13.000	35.9339	77.50	.Q	.V	.	.	.
13.083	36.4746	78.51	.Q	.V	.	.	.
13.167	37.0227	79.57	.Q	.V	.	.	.
13.250	37.5782	80.66	.Q	.V	.	.	.
13.333	38.1416	81.81	.Q	.V	.	.	.
13.417	38.7132	82.99	.Q	.V	.	.	.
13.500	39.2934	84.25	.Q	.V	.	.	.
13.583	39.8825	85.54	.Q	.V	.	.	.

13.667	40.4810	86.91	. Q	. V	.	.	.
13.750	41.0894	88.33	. Q	. V	.	.	.
13.833	41.7081	89.84	. Q	. V	.	.	.
13.917	42.3376	91.41	. Q	. V	.	.	.
14.000	42.9787	93.08	. Q	. V	.	.	.
14.083	43.6328	94.98	. Q	. V	.	.	.
14.167	44.3054	97.66	. Q	. V	.	.	.
14.250	45.0020	101.15	. Q	. V	.	.	.
14.333	45.7262	105.16	. Q	. V	.	.	.
14.417	46.4748	108.70	. Q	. V	.	.	.
14.500	47.2445	111.75	. Q	. V	.	.	.
14.583	48.0337	114.59	. Q	. V	.	.	.
14.667	48.8427	117.46	. Q	. V	.	.	.
14.750	49.6721	120.43	. Q	. V	.	.	.
14.833	50.5239	123.68	. Q	. V	.	.	.
14.917	51.3997	127.16	. Q	. V	.	.	.
15.000	52.3026	131.09	. Q	. V	.	.	.
15.083	53.2366	135.62	. Q	. V	.	.	.
15.167	54.2092	141.22	. Q	. V	.	.	.
15.250	55.2281	147.95	. Q	. V	.	.	.
15.333	56.3032	156.10	. Q	. V	.	.	.
15.417	57.4335	164.12	. Q	. V	.	.	.
15.500	58.5912	168.11	. Q	. V	.	.	.
15.583	59.7444	167.44	. Q	. V	.	.	.
15.667	60.8894	166.26	. Q	. V	.	.	.
15.750	62.0870	173.88	. Q	. V	.	.	.
15.833	63.4341	195.61	. Q	. V	.	.	.
15.917	65.0328	232.13	. Q	. V	.	.	.
16.000	67.0450	292.18	. Q	. V	.	.	.
16.083	69.8639	409.29	. Q	. V	.	.	.
16.167	74.2333	634.45	. Q	. V	. Q	.	.
16.250	79.9660	832.38	. Q	. V	. Q	.	.
16.333	86.0061	877.03	. Q	. V	. Q	.	.
16.417	90.6272	670.98	. Q	. V	. Q	.	.
16.500	93.6510	439.06	. Q	. V	. Q	.	.
16.583	95.7439	303.88	. Q	. V	. Q	.	.
16.667	97.3056	226.77	. Q	. V	. Q	.	.
16.750	98.6040	188.53	. Q	. V	. Q	.	.
16.833	99.7662	168.74	. Q	. V	. Q	.	.
16.917	100.8099	151.55	. Q	. V	. Q	.	.
17.000	101.7568	137.49	. Q	. V	. Q	.	.
17.083	102.6289	126.63	. Q	. V	. Q	.	.
17.167	103.4417	118.02	. Q	. V	. Q	.	.
17.250	104.2048	110.81	. Q	. V	. Q	.	.
17.333	104.9215	104.07	. Q	. V	. Q	.	.
17.417	105.5999	98.50	. Q	. V	. Q	.	.
17.500	106.2480	94.10	. Q	. V	. Q	.	.
17.583	106.8709	90.45	. Q	. V	. Q	.	.
17.667	107.4724	87.34	. Q	. V	. Q	.	.
17.750	108.0550	84.59	. Q	. V	. Q	.	.
17.833	108.6202	82.08	. Q	. V	. Q	.	.
17.917	109.1697	79.78	. Q	. V	. Q	.	.
18.000	109.7047	77.68	. Q	. V	. Q	.	.
18.083	110.2237	75.35	. Q	. V	. Q	.	.
18.167	110.7160	71.49	. Q	. V	. Q	.	.
18.250	111.1698	65.90	. Q	. V	. Q	.	.
18.333	111.5796	59.49	. Q	. V	. Q	.	.
18.417	111.9560	54.67	. Q	. V	. Q	.	.

18.500	112.3120	51.69	. Q	.	.	.	V	.
18.583	112.6542	49.69	. Q	.	.	.	V	.
18.667	112.9866	48.26	. Q	.	.	.	V	.
18.750	113.3109	47.08	. Q	.	.	.	V	.
18.833	113.6276	45.99	. Q	.	.	.	V	.
18.917	113.9373	44.98	. Q	.	.	.	V	.
19.000	114.2407	44.05	. Q	.	.	.	V	.
19.083	114.5381	43.18	. Q	.	.	.	V	.
19.167	114.8299	42.37	. Q	.	.	.	V	.
19.250	115.1164	41.60	. Q	.	.	.	V	.
19.333	115.3978	40.86	. Q	.	.	.	V	.
19.417	115.6743	40.15	. Q	.	.	.	V	.
19.500	115.9461	39.47	. Q	.	.	.	V	.
19.583	116.2135	38.83	. Q	.	.	.	V	.
19.667	116.4766	38.21	. Q	.	.	.	V	.
19.750	116.7357	37.61	. Q	.	.	.	V	.
19.833	116.9907	37.04	. Q	.	.	.	V	.
19.917	117.2420	36.49	. Q	.	.	.	V	.
20.000	117.4897	35.96	. Q	.	.	.	V	.
20.083	117.7338	35.45	. Q	.	.	.	V	.
20.167	117.9745	34.96	. Q	.	.	.	V	.
20.250	118.2120	34.48	. Q	.	.	.	V	.
20.333	118.4463	34.02	. Q	.	.	.	V	.
20.417	118.6776	33.58	. Q	.	.	.	V	.
20.500	118.9059	33.15	. Q	.	.	.	V	.
20.583	119.1313	32.74	. Q	.	.	.	V	.
20.667	119.3540	32.33	. Q	.	.	.	V	.
20.750	119.5740	31.94	. Q	.	.	.	V	.
20.833	119.7914	31.57	. Q	.	.	.	V	.
20.917	120.0063	31.20	. Q	.	.	.	V	.
21.000	120.2188	30.85	. Q	.	.	.	V	.
21.083	120.4288	30.50	. Q	.	.	.	V	.
21.167	120.6366	30.17	. Q	.	.	.	V	.
21.250	120.8421	29.84	. Q	.	.	.	V	.
21.333	121.0454	29.52	. Q	.	.	.	V	.
21.417	121.2466	29.21	. Q	.	.	.	V	.
21.500	121.4457	28.91	. Q	.	.	.	V	.
21.583	121.6429	28.62	. Q	.	.	.	V	.
21.667	121.8380	28.34	. Q	.	.	.	V	.
21.750	122.0313	28.06	. Q	.	.	.	V	.
21.833	122.2226	27.79	. Q	.	.	.	V	.
21.917	122.4122	27.52	. Q	.	.	.	V	.
22.000	122.6000	27.27	. Q	.	.	.	V	.
22.083	122.7860	27.01	. Q	.	.	.	V	.
22.167	122.9704	26.77	. Q	.	.	.	V	.
22.250	123.1531	26.53	. Q	.	.	.	V	.
22.333	123.3342	26.29	. Q	.	.	.	V	.
22.417	123.5137	26.06	. Q	.	.	.	V	.
22.500	123.6917	25.84	. Q	.	.	.	V	.
22.583	123.8681	25.62	. Q	.	.	.	V	.
22.667	124.0431	25.41	. Q	.	.	.	V	.
22.750	124.2166	25.20	. Q	.	.	.	V	.
22.833	124.3887	24.99	. Q	.	.	.	V	.
22.917	124.5595	24.79	. Q	.	.	.	V	.
23.000	124.7288	24.59	. Q	.	.	.	V	.
23.083	124.8969	24.40	. Q	.	.	.	V	.
23.167	125.0636	24.21	. Q	.	.	.	V	.
23.250	125.2290	24.02	. Q	.	.	.	V	.

23.333	125.3932	23.84	.Q	.	.	.	V.
23.417	125.5562	23.66	.Q	.	.	.	V.
23.500	125.7180	23.49	.Q	.	.	.	V.
23.583	125.8785	23.32	.Q	.	.	.	V.
23.667	126.0380	23.15	.Q	.	.	.	V.
23.750	126.1962	22.98	.Q	.	.	.	V.
23.833	126.3534	22.82	.Q	.	.	.	V.
23.917	126.5095	22.66	.Q	.	.	.	V.
24.000	126.6645	22.50	.Q	.	.	.	V.
24.083	126.8151	21.87	Q	.	.	.	V.
24.167	126.9472	19.18	Q	.	.	.	V.
24.250	127.0450	14.21	Q	.	.	.	V.
24.333	127.1008	8.10	Q	.	.	.	V.
24.417	127.1272	3.83	Q	.	.	.	V.
24.500	127.1392	1.74	Q	.	.	.	V.
24.583	127.1443	0.74	Q	.	.	.	V.
24.667	127.1469	0.37	Q	.	.	.	V.
24.750	127.1485	0.23	Q	.	.	.	V.
24.833	127.1493	0.12	Q	.	.	.	V.
24.917	127.1496	0.05	Q	.	.	.	V.
25.000	127.1497	0.01	Q	.	.	.	V

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1500.0
10%	235.0
20%	60.0
30%	40.0
40%	30.0
50%	25.0
60%	20.0
70%	20.0
80%	10.0
90%	10.0

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

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

WATERSHED AREA = 117.200 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.371 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.283
LOW LOSS FRACTION = 0.451

HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.40
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.87
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.15
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.94
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.71
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.49

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 22.462

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.316	18.656
2	5.911	65.122
3	16.925	156.120
4	31.555	207.360
5	50.077	262.524
6	68.064	254.950
7	80.668	178.646
8	88.629	112.844
9	93.356	67.001
10	96.247	40.965
11	97.873	23.049
12	98.437	7.999
13	98.858	5.969
14	99.280	5.971
15	99.701	5.969
16	100.000	4.243

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 17.4962
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 26.2287

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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	50.0	100.0	150.0	200.0
0.083	0.0004	0.06	Q	.	.	.	.
0.167	0.0022	0.26	Q	.	.	.	.
0.250	0.0074	0.75	Q	.	.	.	.
0.333	0.0170	1.40	Q	.	.	.	.
0.417	0.0323	2.22	Q	.	.	.	.
0.500	0.0532	3.03	Q	.	.	.	.
0.583	0.0779	3.60	Q	.	.	.	.
0.667	0.1052	3.96	Q	.	.	.	.
0.750	0.1340	4.18	Q	.	.	.	.
0.833	0.1638	4.32	Q	.	.	.	.
0.917	0.1942	4.41	Q	.	.	.	.
1.000	0.2248	4.45	Q	.	.	.	.
1.083	0.2557	4.48	Q	.	.	.	.
1.167	0.2868	4.52	Q	.	.	.	.
1.250	0.3182	4.55	Q	.	.	.	.
1.333	0.3497	4.58	Q	.	.	.	.
1.417	0.3814	4.60	Q	.	.	.	.
1.500	0.4132	4.61	Q	.	.	.	.
1.583	0.4451	4.63	Q	.	.	.	.
1.667	0.4771	4.65	Q	.	.	.	.
1.750	0.5092	4.66	Q	.	.	.	.
1.833	0.5414	4.68	Q	.	.	.	.
1.917	0.5738	4.70	Q	.	.	.	.
2.000	0.6063	4.72	Q	.	.	.	.
2.083	0.6389	4.73	Q	.	.	.	.
2.167	0.6716	4.75	QV	.	.	.	.
2.250	0.7044	4.77	QV	.	.	.	.
2.333	0.7374	4.79	QV	.	.	.	.
2.417	0.7705	4.80	QV	.	.	.	.
2.500	0.8037	4.82	QV	.	.	.	.
2.583	0.8370	4.84	QV	.	.	.	.
2.667	0.8705	4.86	QV	.	.	.	.
2.750	0.9040	4.88	QV	.	.	.	.
2.833	0.9378	4.90	QV	.	.	.	.
2.917	0.9716	4.92	QV	.	.	.	.
3.000	1.0056	4.93	QV	.	.	.	.
3.083	1.0397	4.95	QV	.	.	.	.
3.167	1.0740	4.97	QV	.	.	.	.
3.250	1.1084	4.99	QV	.	.	.	.
3.333	1.1429	5.01	.Q	.	.	.	.
3.417	1.1776	5.03	.Q	.	.	.	.
3.500	1.2124	5.05	.Q	.	.	.	.
3.583	1.2473	5.08	.Q	.	.	.	.
3.667	1.2824	5.10	.Q	.	.	.	.
3.750	1.3177	5.12	.QV	.	.	.	.
3.833	1.3531	5.14	.QV	.	.	.	.
3.917	1.3886	5.16	.QV	.	.	.	.

4.000	1.4243	5.18	.QV	.	.	.	.
4.083	1.4601	5.20	.QV	.	.	.	.
4.167	1.4961	5.23	.QV	.	.	.	.
4.250	1.5323	5.25	.QV	.	.	.	.
4.333	1.5686	5.27	.QV	.	.	.	.
4.417	1.6051	5.30	.QV	.	.	.	.
4.500	1.6417	5.32	.QV	.	.	.	.
4.583	1.6785	5.34	.QV	.	.	.	.
4.667	1.7154	5.37	.QV	.	.	.	.
4.750	1.7526	5.39	.QV	.	.	.	.
4.833	1.7899	5.41	.QV	.	.	.	.
4.917	1.8273	5.44	.QV	.	.	.	.
5.000	1.8650	5.46	.QV	.	.	.	.
5.083	1.9028	5.49	.QV	.	.	.	.
5.167	1.9408	5.52	.QV	.	.	.	.
5.250	1.9789	5.54	.Q V	.	.	.	.
5.333	2.0173	5.57	.Q V	.	.	.	.
5.417	2.0558	5.59	.Q V	.	.	.	.
5.500	2.0945	5.62	.Q V	.	.	.	.
5.583	2.1334	5.65	.Q V	.	.	.	.
5.667	2.1725	5.68	.Q V	.	.	.	.
5.750	2.2118	5.70	.Q V	.	.	.	.
5.833	2.2513	5.73	.Q V	.	.	.	.
5.917	2.2910	5.76	.Q V	.	.	.	.
6.000	2.3309	5.79	.Q V	.	.	.	.
6.083	2.3710	5.82	.Q V	.	.	.	.
6.167	2.4112	5.85	.Q V	.	.	.	.
6.250	2.4517	5.88	.Q V	.	.	.	.
6.333	2.4925	5.91	.Q V	.	.	.	.
6.417	2.5334	5.94	.Q V	.	.	.	.
6.500	2.5745	5.97	.Q V	.	.	.	.
6.583	2.6159	6.01	.Q V	.	.	.	.
6.667	2.6575	6.04	.Q V	.	.	.	.
6.750	2.6993	6.07	.Q V	.	.	.	.
6.833	2.7413	6.10	.Q V	.	.	.	.
6.917	2.7836	6.14	.Q V	.	.	.	.
7.000	2.8261	6.17	.Q V	.	.	.	.
7.083	2.8688	6.21	.Q V	.	.	.	.
7.167	2.9118	6.24	.Q V	.	.	.	.
7.250	2.9551	6.28	.Q V	.	.	.	.
7.333	2.9986	6.31	.Q V	.	.	.	.
7.417	3.0423	6.35	.Q V	.	.	.	.
7.500	3.0863	6.39	.Q V	.	.	.	.
7.583	3.1306	6.43	.Q V	.	.	.	.
7.667	3.1751	6.47	.Q V	.	.	.	.
7.750	3.2199	6.50	.Q V	.	.	.	.
7.833	3.2650	6.54	.Q V	.	.	.	.
7.917	3.3103	6.58	.Q V	.	.	.	.
8.000	3.3559	6.63	.Q V	.	.	.	.
8.083	3.4019	6.67	.Q V	.	.	.	.
8.167	3.4481	6.71	.Q V	.	.	.	.
8.250	3.4946	6.75	.Q V	.	.	.	.
8.333	3.5414	6.80	.Q V	.	.	.	.
8.417	3.5885	6.84	.Q V	.	.	.	.
8.500	3.6359	6.89	.Q V	.	.	.	.
8.583	3.6837	6.93	.Q V	.	.	.	.
8.667	3.7318	6.98	.Q V	.	.	.	.
8.750	3.7802	7.03	.Q V	.	.	.	.

8.833	3.8289	7.08	.Q	V	.	.	.	.
8.917	3.8780	7.13	.Q	V	.	.	.	.
9.000	3.9274	7.18	.Q	V	.	.	.	.
9.083	3.9772	7.23	.Q	V	.	.	.	.
9.167	4.0273	7.28	.Q	V	.	.	.	.
9.250	4.0778	7.33	.Q	V	.	.	.	.
9.333	4.1287	7.39	.Q	V	.	.	.	.
9.417	4.1800	7.44	.Q	V	.	.	.	.
9.500	4.2316	7.50	.Q	V	.	.	.	.
9.583	4.2837	7.56	.Q	V	.	.	.	.
9.667	4.3361	7.62	.Q	V	.	.	.	.
9.750	4.3890	7.68	.Q	V	.	.	.	.
9.833	4.4423	7.74	.Q	V	.	.	.	.
9.917	4.4960	7.80	.Q	V	.	.	.	.
10.000	4.5502	7.86	.Q	V	.	.	.	.
10.083	4.6048	7.93	.Q	V	.	.	.	.
10.167	4.6598	8.00	.Q	V	.	.	.	.
10.250	4.7154	8.06	.Q	V	.	.	.	.
10.333	4.7714	8.13	.Q	V	.	.	.	.
10.417	4.8279	8.20	.Q	V	.	.	.	.
10.500	4.8849	8.28	.Q	V	.	.	.	.
10.583	4.9424	8.35	.Q	V	.	.	.	.
10.667	5.0004	8.43	.Q	V	.	.	.	.
10.750	5.0590	8.51	.Q	V	.	.	.	.
10.833	5.1181	8.58	.Q	V	.	.	.	.
10.917	5.1778	8.67	.Q	V	.	.	.	.
11.000	5.2381	8.75	.Q	V	.	.	.	.
11.083	5.2990	8.84	.Q	V	.	.	.	.
11.167	5.3604	8.92	.Q	V	.	.	.	.
11.250	5.4225	9.02	.Q	V	.	.	.	.
11.333	5.4852	9.11	.Q	V	.	.	.	.
11.417	5.5486	9.20	.Q	V	.	.	.	.
11.500	5.6127	9.30	.Q	V	.	.	.	.
11.583	5.6774	9.40	.Q	V	.	.	.	.
11.667	5.7429	9.51	.Q	V	.	.	.	.
11.750	5.8091	9.61	.Q	V	.	.	.	.
11.833	5.8760	9.72	.Q	V	.	.	.	.
11.917	5.9438	9.84	.Q	V	.	.	.	.
12.000	6.0123	9.95	.Q	V	.	.	.	.
12.083	6.0820	10.12	.Q	V	.	.	.	.
12.167	6.1537	10.41	.Q	V	.	.	.	.
12.250	6.2290	10.93	.Q	V	.	.	.	.
12.333	6.3088	11.59	.Q	V	.	.	.	.
12.417	6.3942	12.40	.Q	V	.	.	.	.
12.500	6.4850	13.19	.Q	V	.	.	.	.
12.583	6.5800	13.80	.Q	V	.	.	.	.
12.667	6.6781	14.24	.Q	V	.	.	.	.
12.750	6.7785	14.58	.Q	V	.	.	.	.
12.833	6.8808	14.85	.Q	V	.	.	.	.
12.917	6.9847	15.09	.Q	V	.	.	.	.
13.000	7.0901	15.30	.Q	V	.	.	.	.
13.083	7.1969	15.51	.Q	V	.	.	.	.
13.167	7.3052	15.72	.Q	.V	.	.	.	.
13.250	7.4150	15.95	.Q	.V	.	.	.	.
13.333	7.5264	16.17	.Q	.V	.	.	.	.
13.417	7.6393	16.40	.Q	.V	.	.	.	.
13.500	7.7539	16.64	.Q	.V	.	.	.	.
13.583	7.8702	16.88	.Q	.V	.	.	.	.

13.667	7.9882	17.14	.Q	.V	.	.	.	.
13.750	8.1081	17.41	.Q	.V	.	.	.	.
13.833	8.2299	17.69	.Q	.V	.	.	.	.
13.917	8.3538	17.99	.Q	.V	.	.	.	.
14.000	8.4799	18.30	.Q	.V	.	.	.	.
14.083	8.6083	18.65	.Q	.V	.	.	.	.
14.167	8.7395	19.06	.Q	.V	.	.	.	.
14.250	8.8743	19.58	.Q	.V	.	.	.	.
14.333	9.0132	20.17	.Q	.V	.	.	.	.
14.417	9.1568	20.84	.Q	.V	.	.	.	.
14.500	9.3050	21.53	.Q	.V	.	.	.	.
14.583	9.4577	22.17	.Q	.V	.	.	.	.
14.667	9.6146	22.78	.Q	.V	.	.	.	.
14.750	9.7757	23.39	.Q	.V	.	.	.	.
14.833	9.9410	24.00	.Q	.V	.	.	.	.
14.917	10.1108	24.65	.Q	.V	.	.	.	.
15.000	10.2853	25.34	.Q	.V	.	.	.	.
15.083	10.4650	26.09	.Q	.V	.	.	.	.
15.167	10.6502	26.90	.Q	.V	.	.	.	.
15.250	10.8418	27.81	.Q	.V	.	.	.	.
15.333	11.0402	28.81	.Q	.V	.	.	.	.
15.417	11.2457	29.84	.Q	.V	.	.	.	.
15.500	11.4573	30.72	.Q	.V	.	.	.	.
15.583	11.6727	31.28	.Q	.V	.	.	.	.
15.667	11.8914	31.76	.Q	.V	.	.	.	.
15.750	12.1146	32.41	.Q	.V	.	.	.	.
15.833	12.3485	33.96	.Q	.V	.	.	.	.
15.917	12.6095	37.89	.Q	.V	.	.	.	.
16.000	12.9210	45.23	.Q	.V	.	.	.	.
16.083	13.3490	62.15	.Q	.V	.	.	.	.
16.167	13.9652	89.47	.Q	.V	.	.	.	.
16.250	14.8387	126.84	.Q	.V	.Q	.	.	.
16.333	15.8616	148.53	.Q	.V	.Q	.	.	.
16.417	16.9786	162.18	.Q	.V	.Q	.	.	.
16.500	18.0150	150.49	.Q	.V	.Q	.	.	.
16.583	18.8180	116.59	.Q	.V	.Q	.	.	.
16.667	19.4120	86.25	.Q	.V	.Q	.	.	.
16.750	19.8569	64.60	.Q	.V	.Q	.	.	.
16.833	20.2078	50.96	.Q	.V	.Q	.	.	.
16.917	20.4917	41.22	.Q	.V	.Q	.	.	.
17.000	20.7243	33.77	.Q	.V	.Q	.	.	.
17.083	20.9367	30.83	.Q	.V	.Q	.	.	.
17.167	21.1363	28.98	.Q	.V	.Q	.	.	.
17.250	21.3232	27.14	.Q	.V	.Q	.	.	.
17.333	21.4941	24.81	.Q	.V	.Q	.	.	.
17.417	21.6460	22.06	.Q	.V	.Q	.	.	.
17.500	21.7888	20.74	.Q	.V	.Q	.	.	.
17.583	21.9247	19.74	.Q	.V	.Q	.	.	.
17.667	22.0549	18.89	.Q	.V	.Q	.	.	.
17.750	22.1799	18.16	.Q	.V	.Q	.	.	.
17.833	22.3006	17.52	.Q	.V	.Q	.	.	.
17.917	22.4174	16.96	.Q	.V	.Q	.	.	.
18.000	22.5307	16.45	.Q	.V	.Q	.	.	.
18.083	22.6405	15.95	.Q	.V	.Q	.	.	.
18.167	22.7463	15.36	.Q	.V	.Q	.	.	.
18.250	22.8467	14.58	.Q	.V	.Q	.	.	.
18.333	22.9410	13.69	.Q	.V	.Q	.	.	.
18.417	23.0285	12.70	.Q	.V	.Q	.	.	.

18.500	23.1095	11.76	. Q	.	.	.	V	.
18.583	23.1855	11.03	. Q	.	.	.	V	.
18.667	23.2577	10.49	. Q	.	.	.	V	.
18.750	23.3271	10.08	. Q	.	.	.	V	.
18.833	23.3942	9.75	.Q	.	.	.	V	.
18.917	23.4594	9.48	.Q	.	.	.	V	.
19.000	23.5232	9.26	.Q	.	.	.	V	.
19.083	23.5855	9.05	.Q	.	.	.	V	.
19.167	23.6465	8.86	.Q	.	.	.	V	.
19.250	23.7062	8.67	.Q	.	.	.	V	.
19.333	23.7648	8.50	.Q	.	.	.	V	.
19.417	23.8222	8.34	.Q	.	.	.	V	.
19.500	23.8787	8.20	.Q	.	.	.	V	.
19.583	23.9342	8.06	.Q	.	.	.	V	.
19.667	23.9887	7.92	.Q	.	.	.	V	.
19.750	24.0424	7.79	.Q	.	.	.	V	.
19.833	24.0952	7.67	.Q	.	.	.	V	.
19.917	24.1472	7.55	.Q	.	.	.	V	.
20.000	24.1984	7.44	.Q	.	.	.	V	.
20.083	24.2489	7.33	.Q	.	.	.	V	.
20.167	24.2986	7.22	.Q	.	.	.	V	.
20.250	24.3477	7.12	.Q	.	.	.	V	.
20.333	24.3960	7.02	.Q	.	.	.	V	.
20.417	24.4437	6.93	.Q	.	.	.	V	.
20.500	24.4908	6.84	.Q	.	.	.	V	.
20.583	24.5373	6.75	.Q	.	.	.	V	.
20.667	24.5831	6.66	.Q	.	.	.	V	.
20.750	24.6285	6.58	.Q	.	.	.	V	.
20.833	24.6732	6.50	.Q	.	.	.	V	.
20.917	24.7174	6.42	.Q	.	.	.	V	.
21.000	24.7611	6.35	.Q	.	.	.	V	.
21.083	24.8043	6.27	.Q	.	.	.	V	.
21.167	24.8470	6.20	.Q	.	.	.	V	.
21.250	24.8893	6.13	.Q	.	.	.	V	.
21.333	24.9310	6.06	.Q	.	.	.	V	.
21.417	24.9723	6.00	.Q	.	.	.	V	.
21.500	25.0132	5.94	.Q	.	.	.	V	.
21.583	25.0537	5.87	.Q	.	.	.	V	.
21.667	25.0937	5.81	.Q	.	.	.	V	.
21.750	25.1334	5.76	.Q	.	.	.	V	.
21.833	25.1726	5.70	.Q	.	.	.	V	.
21.917	25.2115	5.64	.Q	.	.	.	V	.
22.000	25.2500	5.59	.Q	.	.	.	V	.
22.083	25.2881	5.54	.Q	.	.	.	V	.
22.167	25.3259	5.49	.Q	.	.	.	V	.
22.250	25.3633	5.43	.Q	.	.	.	V	.
22.333	25.4004	5.39	.Q	.	.	.	V	.
22.417	25.4372	5.34	.Q	.	.	.	V	.
22.500	25.4736	5.29	.Q	.	.	.	V	.
22.583	25.5097	5.24	.Q	.	.	.	V	.
22.667	25.5456	5.20	.Q	.	.	.	V	.
22.750	25.5811	5.16	.Q	.	.	.	V	.
22.833	25.6163	5.11	.Q	.	.	.	V	.
22.917	25.6512	5.07	.Q	.	.	.	V	.
23.000	25.6858	5.03	.Q	.	.	.	V	.
23.083	25.7202	4.99	Q	.	.	.	V	.
23.167	25.7543	4.95	Q	.	.	.	V	.
23.250	25.7881	4.91	Q	.	.	.	V	.

23.333	25.8217	4.87	Q	.	.	.	V	.
23.417	25.8550	4.84	Q	.	.	.	V	.
23.500	25.8880	4.80	Q	.	.	.	V	.
23.583	25.9208	4.76	Q	.	.	.	V	.
23.667	25.9534	4.73	Q	.	.	.	V	.
23.750	25.9857	4.69	Q	.	.	.	V	.
23.833	26.0178	4.66	Q	.	.	.	V	.
23.917	26.0497	4.63	Q	.	.	.	V	.
24.000	26.0813	4.59	Q	.	.	.	V	.
24.083	26.1123	4.50	Q	.	.	.	V	.
24.167	26.1418	4.27	Q	.	.	.	V	.
24.250	26.1676	3.75	Q	.	.	.	V	.
24.333	26.1889	3.08	Q	.	.	.	V	.
24.417	26.2043	2.24	Q	.	.	.	V	.
24.500	26.2142	1.43	Q	.	.	.	V	.
24.583	26.2202	0.87	Q	.	.	.	V	.
24.667	26.2237	0.51	Q	.	.	.	V	.
24.750	26.2257	0.30	Q	.	.	.	V	.
24.833	26.2269	0.17	Q	.	.	.	V	.
24.917	26.2276	0.10	Q	.	.	.	V	.
25.000	26.2280	0.07	Q	.	.	.	V	.
25.083	26.2284	0.05	Q	.	.	.	V	.
25.167	26.2286	0.03	Q	.	.	.	V	.
25.250	26.2287	0.01	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1515.0
10%	280.0
20%	75.0
30%	50.0
40%	35.0
50%	35.0
60%	25.0
70%	25.0
80%	15.0
90%	15.0

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

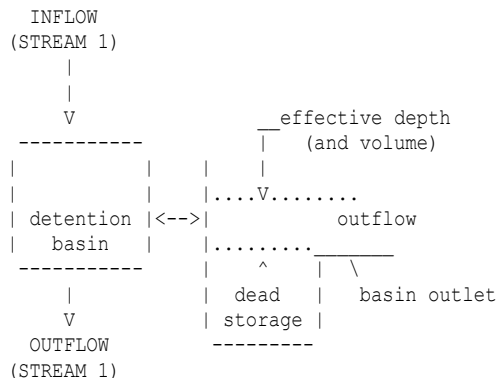
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<<
=====

FLOW PROCESS FROM NODE 431.00 TO NODE 331.00 IS CODE = 7

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

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

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

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

=====

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH (FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME (AF)
0.083	0.000	1.20	0.00	0.00	0.0	0.008
0.167	0.000	6.97	0.00	0.03	0.0	0.056
0.250	0.000	18.58	0.00	0.09	0.0	0.184
0.333	0.000	33.64	0.00	0.21	0.0	0.416
0.417	0.000	47.09	0.00	0.37	0.0	0.740
0.500	0.000	55.25	0.00	0.56	0.0	1.121
0.583	0.000	59.73	0.00	0.77	0.0	1.532
0.667	0.000	62.11	0.00	0.98	0.0	1.960
0.750	0.000	63.35	0.00	1.10	0.0	2.396
0.833	0.000	64.02	0.00	1.21	0.0	2.837
0.917	0.000	64.58	0.00	1.32	0.0	3.281
1.000	0.000	65.04	0.00	1.43	0.0	3.729
1.083	0.000	65.38	0.00	1.54	0.0	4.179
1.167	0.000	65.66	0.00	1.66	0.0	4.631
1.250	0.000	65.91	0.00	1.77	0.0	5.085
1.333	0.000	66.15	0.00	1.89	0.0	5.541
1.417	0.000	66.39	0.00	2.00	0.0	5.998
1.500	0.000	66.62	0.00	2.07	0.0	6.456
1.583	0.000	66.86	0.00	2.13	0.0	6.917
1.667	0.000	67.10	0.00	2.20	0.0	7.379
1.750	0.000	67.34	0.00	2.26	0.0	7.842
1.833	0.000	67.59	0.00	2.33	0.0	8.308
1.917	0.000	67.84	0.00	2.40	0.0	8.775
2.000	0.000	68.09	0.00	2.46	0.0	9.243
2.083	0.000	68.34	0.00	2.53	0.0	9.714
2.167	0.000	68.59	0.00	2.60	0.0	10.186
2.250	0.000	68.85	0.00	2.67	0.0	10.660
2.333	0.000	69.11	0.00	2.73	0.0	11.136
2.417	0.000	69.37	0.00	2.80	0.0	11.613
2.500	0.000	69.64	0.00	2.87	0.0	12.093
2.583	0.000	69.90	0.00	2.94	0.0	12.574
2.667	0.000	70.17	0.00	3.01	0.0	13.057
2.750	0.000	70.44	0.00	3.07	0.0	13.542
2.833	0.000	70.72	0.00	3.13	0.0	14.029
2.917	0.000	70.99	0.00	3.19	0.0	14.517
3.000	0.000	71.27	0.00	3.25	0.0	15.008
3.083	0.000	71.56	0.00	3.31	0.0	15.501
3.167	0.000	71.84	0.00	3.37	0.0	15.995
3.250	0.000	72.13	0.00	3.44	0.0	16.492
3.333	0.000	72.43	0.00	3.50	0.0	16.990
3.417	0.000	72.72	0.00	3.56	0.0	17.491
3.500	0.000	73.02	0.00	3.62	0.0	17.993
3.583	0.000	73.32	0.00	3.69	0.0	18.498
3.667	0.000	73.63	0.00	3.75	0.0	19.005
3.750	0.000	73.94	0.00	3.81	0.0	19.514
3.833	0.000	74.25	0.00	3.88	0.0	20.025
3.917	0.000	74.56	0.00	3.94	0.0	20.538
4.000	0.000	74.88	0.00	4.01	0.0	21.053

4.083	0.000	75.20	0.00	4.06	0.0	21.571
4.167	0.000	75.53	0.00	4.12	0.0	22.091
4.250	0.000	75.86	0.00	4.18	0.0	22.613
4.333	0.000	76.19	0.00	4.24	0.0	23.137
4.417	0.000	76.53	0.00	4.30	0.0	23.664
4.500	0.000	76.87	0.00	4.35	0.0	24.193
4.583	0.000	77.21	0.00	4.41	0.0	24.725
4.667	0.000	77.56	0.00	4.47	0.0	25.258
4.750	0.000	77.91	0.00	4.53	0.0	25.795
4.833	0.000	78.27	0.00	4.59	0.1	26.333
4.917	0.000	78.63	0.00	4.65	0.1	26.875
5.000	0.000	79.00	0.00	4.71	0.1	27.418
5.083	0.000	79.37	0.00	4.77	0.1	27.965
5.167	0.000	79.74	0.00	4.83	0.1	28.513
5.250	0.000	80.12	0.00	4.90	0.1	29.065
5.333	0.000	80.50	0.00	4.96	0.1	29.619
5.417	0.000	80.89	0.00	5.02	0.1	30.176
5.500	0.000	81.28	0.00	5.07	0.1	30.735
5.583	0.000	81.68	0.00	5.12	0.1	31.297
5.667	0.000	82.08	0.00	5.17	0.1	31.862
5.750	0.000	82.49	0.00	5.22	0.1	32.430
5.833	0.000	82.91	0.00	5.27	0.1	33.000
5.917	0.000	83.33	0.00	5.32	0.1	33.574
6.000	0.000	83.75	0.00	5.38	0.1	34.150
6.083	0.000	84.18	0.00	5.43	0.1	34.730
6.167	0.000	84.62	0.00	5.48	0.1	35.312
6.250	0.000	85.06	0.00	5.54	0.1	35.897
6.333	0.000	85.50	0.00	5.59	0.1	36.486
6.417	0.000	85.96	0.00	5.64	0.1	37.077
6.500	0.000	86.42	0.00	5.70	0.1	37.672
6.583	0.000	86.89	0.00	5.75	0.1	38.270
6.667	0.000	87.36	0.00	5.81	0.1	38.871
6.750	0.000	87.84	0.00	5.86	0.1	39.476
6.833	0.000	88.32	0.00	5.92	0.1	40.084
6.917	0.000	88.82	0.00	5.97	0.1	40.695
7.000	0.000	89.32	0.00	6.03	0.9	41.304
7.083	0.000	89.83	0.00	6.08	3.2	41.901
7.167	0.000	90.34	0.00	6.12	6.2	42.480
7.250	0.000	90.86	0.00	6.17	9.2	43.043
7.333	0.000	91.40	0.00	6.22	12.0	43.590
7.417	0.000	91.94	0.00	6.26	14.8	44.121
7.500	0.000	92.48	0.00	6.30	17.5	44.637
7.583	0.000	93.04	0.00	6.34	20.1	45.139
7.667	0.000	93.60	0.00	6.39	22.7	45.628
7.750	0.000	94.18	0.00	6.43	25.2	46.103
7.833	0.000	94.76	0.00	6.46	27.6	46.565
7.917	0.000	95.35	0.00	6.50	30.0	47.016
8.000	0.000	95.95	0.00	6.54	32.2	47.455
8.083	0.000	96.56	0.00	6.57	34.5	47.882
8.167	0.000	97.19	0.00	6.61	36.7	48.299
8.250	0.000	97.82	0.00	6.64	38.8	48.706
8.333	0.000	98.46	0.00	6.68	40.9	49.102
8.417	0.000	99.11	0.00	6.71	42.9	49.490
8.500	0.000	99.78	0.00	6.74	44.9	49.868
8.583	0.000	100.46	0.00	6.77	46.8	50.237
8.667	0.000	101.14	0.00	6.80	48.7	50.599
8.750	0.000	101.85	0.00	6.83	50.5	50.952
8.833	0.000	102.56	0.00	6.86	52.3	51.298

8.917	0.000	103.29	0.00	6.89	54.1	51.637
9.000	0.000	104.03	0.00	6.91	55.8	51.969
9.083	0.000	104.78	0.00	6.94	57.5	52.295
9.167	0.000	105.55	0.00	6.97	59.2	52.614
9.250	0.000	106.33	0.00	6.99	60.8	52.927
9.333	0.000	107.13	0.00	7.02	63.7	53.226
9.417	0.000	107.94	0.00	7.04	68.1	53.501
9.500	0.000	108.77	0.00	7.06	72.5	53.751
9.583	0.000	109.62	0.00	7.08	76.4	53.980
9.667	0.000	110.48	0.00	7.09	80.1	54.189
9.750	0.000	111.37	0.00	7.11	83.4	54.381
9.833	0.000	112.26	0.00	7.12	86.5	54.558
9.917	0.000	113.18	0.00	7.13	89.4	54.722
10.000	0.000	114.12	0.00	7.14	92.0	54.875
10.083	0.000	115.08	0.00	7.16	94.5	55.016
10.167	0.000	116.06	0.00	7.17	96.8	55.149
10.250	0.000	117.06	0.00	7.17	98.9	55.274
10.333	0.000	118.09	0.00	7.18	100.9	55.392
10.417	0.000	119.13	0.00	7.19	102.9	55.504
10.500	0.000	120.20	0.00	7.20	104.7	55.611
10.583	0.000	121.30	0.00	7.21	106.4	55.713
10.667	0.000	122.42	0.00	7.22	108.1	55.812
10.750	0.000	123.58	0.00	7.22	109.7	55.907
10.833	0.000	124.75	0.00	7.23	111.3	56.000
10.917	0.000	125.96	0.00	7.24	112.8	56.090
11.000	0.000	127.20	0.00	7.24	114.3	56.179
11.083	0.000	128.47	0.00	7.25	115.8	56.266
11.167	0.000	129.77	0.00	7.26	117.2	56.353
11.250	0.000	131.11	0.00	7.26	118.7	56.438
11.333	0.000	132.49	0.00	7.27	120.1	56.524
11.417	0.000	133.90	0.00	7.28	121.5	56.609
11.500	0.000	135.35	0.00	7.28	123.0	56.694
11.583	0.000	136.85	0.00	7.29	124.4	56.780
11.667	0.000	138.38	0.00	7.30	125.8	56.867
11.750	0.000	139.96	0.00	7.30	127.3	56.954
11.833	0.000	141.59	0.00	7.31	128.7	57.043
11.917	0.000	143.27	0.00	7.32	130.2	57.132
12.000	0.000	145.00	0.00	7.32	131.7	57.224
12.083	0.000	147.76	0.00	7.33	133.3	57.323
12.167	0.000	154.29	0.00	7.34	135.3	57.454
12.250	0.000	165.61	0.00	7.36	137.9	57.645
12.333	0.000	179.80	0.00	7.38	141.7	57.907
12.417	0.000	192.74	0.00	7.40	146.6	58.225
12.500	0.000	201.46	0.00	7.43	152.1	58.565
12.583	0.000	207.26	0.00	7.45	157.7	58.906
12.667	0.000	211.44	0.00	7.48	163.4	59.237
12.750	0.000	214.78	0.00	7.50	168.8	59.554
12.833	0.000	217.74	0.00	7.53	173.9	59.856
12.917	0.000	220.70	0.00	7.55	178.8	60.144
13.000	0.000	223.68	0.00	7.57	183.6	60.421
13.083	0.000	226.67	0.00	7.59	188.1	60.686
13.167	0.000	229.72	0.00	7.61	192.4	60.943
13.250	0.000	232.87	0.00	7.63	196.7	61.192
13.333	0.000	236.13	0.00	7.65	200.8	61.436
13.417	0.000	239.54	0.00	7.67	204.8	61.675
13.500	0.000	243.08	0.00	7.69	208.8	61.911
13.583	0.000	246.79	0.00	7.70	212.7	62.146
13.667	0.000	250.67	0.00	7.72	216.6	62.381

13.750	0.000	254.75	0.00	7.74	220.5	62.616
13.833	0.000	259.01	0.00	7.76	224.5	62.854
13.917	0.000	263.51	0.00	7.78	228.5	63.095
14.000	0.000	268.23	0.00	7.80	232.6	63.341
14.083	0.000	273.61	0.00	7.81	236.7	63.595
14.167	0.000	280.70	0.00	7.84	241.1	63.867
14.250	0.000	289.96	0.00	7.86	245.9	64.170
14.333	0.000	300.63	0.00	7.89	251.3	64.510
14.417	0.000	311.16	0.00	7.91	257.2	64.882
14.500	0.000	320.41	0.00	7.94	263.6	65.273
14.583	0.000	328.97	0.00	7.98	270.2	65.677
14.667	0.000	337.38	0.00	8.01	277.5	66.090
14.750	0.000	346.02	0.00	8.04	286.8	66.498
14.833	0.000	355.14	0.00	8.07	297.4	66.895
14.917	0.000	365.09	0.00	8.10	307.9	67.289
15.000	0.000	376.22	0.00	8.13	318.4	67.687
15.083	0.000	389.11	0.00	8.16	329.1	68.101
15.167	0.000	404.40	0.00	8.20	340.4	68.541
15.250	0.000	422.50	0.00	8.23	352.6	69.022
15.333	0.000	443.56	0.00	8.27	366.0	69.556
15.417	0.000	464.73	0.00	8.32	380.8	70.135
15.500	0.000	477.79	0.00	8.36	395.9	70.699
15.583	0.000	480.53	0.00	8.40	409.8	71.186
15.667	0.000	480.66	0.00	8.43	421.6	71.593
15.750	0.000	495.53	0.00	8.46	432.7	72.025
15.833	0.000	542.66	0.00	8.51	447.1	72.683
15.917	0.000	628.88	0.00	8.60	470.3	73.775
16.000	0.000	771.47	0.00	8.74	508.7	75.585
16.083	0.000	1055.91	0.00	8.99	576.3	78.888
16.167	0.000	1573.01	0.00	9.46	691.9	84.957
16.250	0.000	2090.38	0.00	10.11	855.4	93.462
16.333	0.000	2288.84	0.00	10.80	999.5	102.342
16.417	0.000	2010.57	0.00	11.27	1084.2	108.721
16.500	0.000	1456.16	0.00	11.43	1127.0	110.988
16.583	0.000	1036.37	0.00	11.38	1134.3	110.314
16.667	0.000	776.98	0.00	11.21	1120.5	107.948
16.750	0.000	620.73	0.00	10.98	1094.5	104.685
16.833	0.000	524.52	0.00	10.69	1057.7	101.013
16.917	0.000	470.07	0.00	10.41	1014.0	97.267
17.000	0.000	425.71	0.00	10.12	969.9	93.519
17.083	0.000	388.18	0.00	9.84	914.1	89.897
17.167	0.000	358.20	0.00	9.58	841.1	86.571
17.250	0.000	333.79	0.00	9.35	766.6	83.590
17.333	0.000	312.85	0.00	9.15	699.9	80.925
17.417	0.000	294.04	0.00	8.96	639.7	78.544
17.500	0.000	279.77	0.00	8.80	583.3	76.454
17.583	0.000	268.09	0.00	8.66	531.6	74.639
17.667	0.000	258.19	0.00	8.54	486.8	73.065
17.750	0.000	249.56	0.00	8.44	447.9	71.699
17.833	0.000	241.87	0.00	8.35	414.1	70.513
17.917	0.000	234.87	0.00	8.27	384.8	69.480
18.000	0.000	228.47	0.00	8.20	359.2	68.580
18.083	0.000	221.61	0.00	8.14	336.8	67.787
18.167	0.000	211.51	0.00	8.08	316.7	67.063
18.250	0.000	197.11	0.00	8.03	297.9	66.368
18.333	0.000	180.33	0.00	7.97	281.2	65.674
18.417	0.000	165.29	0.00	7.92	267.7	64.969
18.500	0.000	154.89	0.00	7.87	256.0	64.273

18.583	0.000	147.78	0.00	7.82	244.6	63.606
18.667	0.000	142.61	0.00	7.77	233.8	62.978
18.750	0.000	138.60	0.00	7.72	223.7	62.392
18.833	0.000	135.22	0.00	7.68	214.2	61.848
18.917	0.000	132.11	0.00	7.64	205.5	61.343
19.000	0.000	129.23	0.00	7.61	197.3	60.873
19.083	0.000	126.59	0.00	7.57	189.8	60.438
19.167	0.000	124.13	0.00	7.54	182.8	60.034
19.250	0.000	121.81	0.00	7.51	176.3	59.659
19.333	0.000	119.61	0.00	7.49	170.2	59.310
19.417	0.000	117.51	0.00	7.46	164.6	58.986
19.500	0.000	115.51	0.00	7.44	159.4	58.684
19.583	0.000	113.59	0.00	7.42	154.5	58.402
19.667	0.000	111.75	0.00	7.40	150.0	58.138
19.750	0.000	109.99	0.00	7.38	145.7	57.892
19.833	0.000	108.29	0.00	7.36	141.7	57.662
19.917	0.000	106.67	0.00	7.34	138.0	57.446
20.000	0.000	105.10	0.00	7.33	134.5	57.243
20.083	0.000	103.59	0.00	7.31	131.2	57.053
20.167	0.000	102.14	0.00	7.30	128.2	56.874
20.250	0.000	100.74	0.00	7.28	125.3	56.705
20.333	0.000	99.39	0.00	7.27	122.5	56.546
20.417	0.000	98.08	0.00	7.26	119.9	56.395
20.500	0.000	96.82	0.00	7.25	117.5	56.253
20.583	0.000	95.59	0.00	7.24	115.2	56.118
20.667	0.000	94.41	0.00	7.23	113.0	55.990
20.750	0.000	93.26	0.00	7.22	110.9	55.869
20.833	0.000	92.15	0.00	7.21	108.9	55.753
20.917	0.000	91.07	0.00	7.20	107.0	55.643
21.000	0.000	90.03	0.00	7.20	105.2	55.538
21.083	0.000	89.01	0.00	7.19	103.5	55.438
21.167	0.000	88.03	0.00	7.18	101.9	55.343
21.250	0.000	87.07	0.00	7.17	100.3	55.251
21.333	0.000	86.14	0.00	7.17	98.8	55.164
21.417	0.000	85.23	0.00	7.16	97.4	55.080
21.500	0.000	84.35	0.00	7.15	96.0	54.999
21.583	0.000	83.49	0.00	7.15	94.7	54.922
21.667	0.000	82.65	0.00	7.14	93.5	54.847
21.750	0.000	81.83	0.00	7.14	92.2	54.776
21.833	0.000	81.04	0.00	7.13	91.1	54.707
21.917	0.000	80.26	0.00	7.13	89.9	54.640
22.000	0.000	79.50	0.00	7.12	88.8	54.576
22.083	0.000	78.77	0.00	7.12	87.8	54.514
22.167	0.000	78.04	0.00	7.11	86.8	54.454
22.250	0.000	77.34	0.00	7.11	85.8	54.396
22.333	0.000	76.65	0.00	7.10	84.8	54.339
22.417	0.000	75.98	0.00	7.10	83.9	54.285
22.500	0.000	75.32	0.00	7.09	83.0	54.232
22.583	0.000	74.68	0.00	7.09	82.1	54.180
22.667	0.000	74.05	0.00	7.09	81.3	54.131
22.750	0.000	73.43	0.00	7.08	80.5	54.082
22.833	0.000	72.83	0.00	7.08	79.7	54.035
22.917	0.000	72.24	0.00	7.08	78.9	53.989
23.000	0.000	71.66	0.00	7.07	78.1	53.945
23.083	0.000	71.10	0.00	7.07	77.4	53.901
23.167	0.000	70.54	0.00	7.07	76.7	53.859
23.250	0.000	69.99	0.00	7.06	76.0	53.817
23.333	0.000	69.46	0.00	7.06	75.3	53.777

23.417	0.000	68.94	0.00	7.06	74.6	53.738
23.500	0.000	68.43	0.00	7.05	74.0	53.700
23.583	0.000	67.92	0.00	7.05	73.4	53.662
23.667	0.000	67.43	0.00	7.05	72.7	53.625
23.750	0.000	66.95	0.00	7.05	72.1	53.590
23.833	0.000	66.47	0.00	7.04	71.6	53.555
23.917	0.000	66.01	0.00	7.04	71.0	53.521
24.000	0.000	65.55	0.00	7.04	70.4	53.487
24.083	0.000	63.90	0.00	7.03	69.8	53.446
24.167	0.000	57.71	0.00	7.03	68.8	53.370
24.250	0.000	45.76	0.00	7.02	67.0	53.224
24.333	0.000	30.47	0.00	7.00	63.9	52.994
24.417	0.000	16.96	0.00	6.97	61.2	52.690
24.500	0.000	8.85	0.00	6.95	59.5	52.341
24.583	0.000	4.50	0.00	6.91	57.7	51.975
24.667	0.000	2.29	0.00	6.88	55.8	51.606
24.750	0.000	1.25	0.00	6.85	53.9	51.244
24.833	0.000	0.79	0.00	6.82	52.0	50.891
24.917	0.000	0.44	0.00	6.80	50.2	50.548
25.000	0.000	0.20	0.00	6.77	48.5	50.216
25.083	0.000	0.08	0.00	6.74	46.8	49.894
25.167	0.000	0.03	0.00	6.72	45.2	49.583
25.250	0.000	0.01	0.00	6.69	43.6	49.283
25.333	0.000	0.00	0.00	6.67	42.1	48.993
25.417	0.000	0.00	0.00	6.64	40.6	48.714
25.500	0.000	0.00	0.00	6.62	39.2	48.444
25.583	0.000	0.00	0.00	6.60	37.8	48.183
25.667	0.000	0.00	0.00	6.58	36.5	47.932
25.750	0.000	0.00	0.00	6.56	35.2	47.690
25.833	0.000	0.00	0.00	6.54	34.0	47.455
25.917	0.000	0.00	0.00	6.52	32.8	47.230
26.000	0.000	0.00	0.00	6.50	31.7	47.012
26.083	0.000	0.00	0.00	6.48	30.5	46.801
26.167	0.000	0.00	0.00	6.47	29.5	46.598
26.250	0.000	0.00	0.00	6.45	28.5	46.402
26.333	0.000	0.00	0.00	6.43	27.5	46.213
26.417	0.000	0.00	0.00	6.42	26.5	46.030
26.500	0.000	0.00	0.00	6.40	25.6	45.854
26.583	0.000	0.00	0.00	6.39	24.7	45.684
26.667	0.000	0.00	0.00	6.38	23.8	45.520
26.750	0.000	0.00	0.00	6.36	23.0	45.362
26.833	0.000	0.00	0.00	6.35	22.2	45.209
26.917	0.000	0.00	0.00	6.34	21.4	45.062
27.000	0.000	0.00	0.00	6.33	20.7	44.919
27.083	0.000	0.00	0.00	6.32	19.9	44.782
27.167	0.000	0.00	0.00	6.30	19.2	44.650
27.250	0.000	0.00	0.00	6.29	18.6	44.522
27.333	0.000	0.00	0.00	6.28	17.9	44.398
27.417	0.000	0.00	0.00	6.27	17.3	44.279
27.500	0.000	0.00	0.00	6.26	16.7	44.164
27.583	0.000	0.00	0.00	6.25	16.1	44.053
27.667	0.000	0.00	0.00	6.25	15.5	43.946
27.750	0.000	0.00	0.00	6.24	15.0	43.843
27.833	0.000	0.00	0.00	6.23	14.5	43.743
27.917	0.000	0.00	0.00	6.22	14.0	43.647
28.000	0.000	0.00	0.00	6.21	13.5	43.554
28.083	0.000	0.00	0.00	6.21	13.0	43.464
28.167	0.000	0.00	0.00	6.20	12.6	43.378

28.250	0.000	0.00	0.00	6.19	12.1	43.294
28.333	0.000	0.00	0.00	6.18	11.7	43.214
28.417	0.000	0.00	0.00	6.18	11.3	43.136
28.500	0.000	0.00	0.00	6.17	10.9	43.061
28.583	0.000	0.00	0.00	6.17	10.5	42.988
28.667	0.000	0.00	0.00	6.16	10.1	42.919
28.750	0.000	0.00	0.00	6.15	9.8	42.851
28.833	0.000	0.00	0.00	6.15	9.5	42.786
28.917	0.000	0.00	0.00	6.14	9.1	42.723
29.000	0.000	0.00	0.00	6.14	8.8	42.663
29.083	0.000	0.00	0.00	6.13	8.5	42.604
29.167	0.000	0.00	0.00	6.13	8.2	42.548
29.250	0.000	0.00	0.00	6.12	7.9	42.493
29.333	0.000	0.00	0.00	6.12	7.6	42.441
29.417	0.000	0.00	0.00	6.12	7.4	42.390
29.500	0.000	0.00	0.00	6.11	7.1	42.341
29.583	0.000	0.00	0.00	6.11	6.9	42.293
29.667	0.000	0.00	0.00	6.10	6.6	42.248
29.750	0.000	0.00	0.00	6.10	6.4	42.204
29.833	0.000	0.00	0.00	6.10	6.2	42.161
29.917	0.000	0.00	0.00	6.09	6.0	42.120

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 365.868 AF
BASIN STORAGE = 36.769 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 329.086 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
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STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q(CFS)	0.	300.0	600.0	900.0	1200.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0000	0.00	Q	.	.	.	.
0.417	0.0000	0.00	Q	.	.	.	.
0.500	0.0001	0.01	Q	.	.	.	.
0.583	0.0001	0.01	Q	.	.	.	.
0.667	0.0002	0.01	Q	.	.	.	.
0.750	0.0003	0.01	Q	.	.	.	.
0.833	0.0004	0.01	Q	.	.	.	.
0.917	0.0005	0.01	Q	.	.	.	.
1.000	0.0006	0.02	Q	.	.	.	.
1.083	0.0007	0.02	Q	.	.	.	.
1.167	0.0008	0.02	Q	.	.	.	.
1.250	0.0009	0.02	Q	.	.	.	.
1.333	0.0011	0.02	Q	.	.	.	.
1.417	0.0012	0.02	Q	.	.	.	.
1.500	0.0014	0.02	Q	.	.	.	.

1.583	0.0015	0.02	Q	.	.	.	.
1.667	0.0017	0.02	Q	.	.	.	.
1.750	0.0019	0.02	Q	.	.	.	.
1.833	0.0020	0.03	Q	.	.	.	.
1.917	0.0022	0.03	Q	.	.	.	.
2.000	0.0024	0.03	Q	.	.	.	.
2.083	0.0026	0.03	Q	.	.	.	.
2.167	0.0028	0.03	Q	.	.	.	.
2.250	0.0030	0.03	Q	.	.	.	.
2.333	0.0032	0.03	Q	.	.	.	.
2.417	0.0034	0.03	Q	.	.	.	.
2.500	0.0036	0.03	Q	.	.	.	.
2.583	0.0038	0.03	Q	.	.	.	.
2.667	0.0040	0.03	Q	.	.	.	.
2.750	0.0043	0.03	Q	.	.	.	.
2.833	0.0045	0.03	Q	.	.	.	.
2.917	0.0048	0.03	Q	.	.	.	.
3.000	0.0050	0.04	Q	.	.	.	.
3.083	0.0052	0.04	Q	.	.	.	.
3.167	0.0055	0.04	Q	.	.	.	.
3.250	0.0058	0.04	Q	.	.	.	.
3.333	0.0060	0.04	Q	.	.	.	.
3.417	0.0063	0.04	Q	.	.	.	.
3.500	0.0066	0.04	Q	.	.	.	.
3.583	0.0068	0.04	Q	.	.	.	.
3.667	0.0071	0.04	Q	.	.	.	.
3.750	0.0074	0.04	Q	.	.	.	.
3.833	0.0077	0.04	Q	.	.	.	.
3.917	0.0080	0.04	Q	.	.	.	.
4.000	0.0083	0.04	Q	.	.	.	.
4.083	0.0086	0.04	Q	.	.	.	.
4.167	0.0089	0.05	Q	.	.	.	.
4.250	0.0092	0.05	Q	.	.	.	.
4.333	0.0095	0.05	Q	.	.	.	.
4.417	0.0099	0.05	Q	.	.	.	.
4.500	0.0102	0.05	Q	.	.	.	.
4.583	0.0105	0.05	Q	.	.	.	.
4.667	0.0109	0.05	Q	.	.	.	.
4.750	0.0112	0.05	Q	.	.	.	.
4.833	0.0115	0.05	Q	.	.	.	.
4.917	0.0119	0.05	Q	.	.	.	.
5.000	0.0123	0.05	Q	.	.	.	.
5.083	0.0126	0.05	Q	.	.	.	.
5.167	0.0130	0.05	Q	.	.	.	.
5.250	0.0133	0.05	Q	.	.	.	.
5.333	0.0137	0.05	Q	.	.	.	.
5.417	0.0141	0.05	Q	.	.	.	.
5.500	0.0145	0.06	Q	.	.	.	.
5.583	0.0149	0.06	Q	.	.	.	.
5.667	0.0153	0.06	Q	.	.	.	.
5.750	0.0156	0.06	Q	.	.	.	.
5.833	0.0160	0.06	Q	.	.	.	.
5.917	0.0164	0.06	Q	.	.	.	.
6.000	0.0168	0.06	Q	.	.	.	.
6.083	0.0173	0.06	Q	.	.	.	.
6.167	0.0177	0.06	Q	.	.	.	.
6.250	0.0181	0.06	Q	.	.	.	.
6.333	0.0185	0.06	Q	.	.	.	.

6.417	0.0189	0.06	Q	.	.	.	.
6.500	0.0194	0.06	Q	.	.	.	.
6.583	0.0198	0.06	Q	.	.	.	.
6.667	0.0202	0.06	Q	.	.	.	.
6.750	0.0207	0.06	Q	.	.	.	.
6.833	0.0211	0.06	Q	.	.	.	.
6.917	0.0216	0.07	Q	.	.	.	.
7.000	0.0274	0.85	Q	.	.	.	.
7.083	0.0493	3.18	Q	.	.	.	.
7.167	0.0921	6.21	Q	.	.	.	.
7.250	0.1551	9.16	Q	.	.	.	.
7.333	0.2379	12.02	Q	.	.	.	.
7.417	0.3399	14.80	Q	.	.	.	.
7.500	0.4604	17.51	Q	.	.	.	.
7.583	0.5991	20.13	Q	.	.	.	.
7.667	0.7554	22.69	Q	.	.	.	.
7.750	0.9288	25.18	Q	.	.	.	.
7.833	1.1188	27.60	Q	.	.	.	.
7.917	1.3251	29.95	Q	.	.	.	.
8.000	1.5472	32.25	VQ	.	.	.	.
8.083	1.7847	34.48	VQ	.	.	.	.
8.167	2.0372	36.66	VQ	.	.	.	.
8.250	2.3043	38.79	VQ	.	.	.	.
8.333	2.5857	40.86	VQ	.	.	.	.
8.417	2.8810	42.88	VQ	.	.	.	.
8.500	3.1900	44.86	VQ	.	.	.	.
8.583	3.5122	46.79	VQ	.	.	.	.
8.667	3.8474	48.67	VQ	.	.	.	.
8.750	4.1953	50.52	VQ	.	.	.	.
8.833	4.5557	52.32	VQ	.	.	.	.
8.917	4.9282	54.09	VQ	.	.	.	.
9.000	5.3127	55.82	VQ	.	.	.	.
9.083	5.7088	57.52	VQ	.	.	.	.
9.167	6.1164	59.18	VQ	.	.	.	.
9.250	6.5352	60.82	V Q	.	.	.	.
9.333	6.9740	63.70	V Q	.	.	.	.
9.417	7.4428	68.07	V Q	.	.	.	.
9.500	7.9417	72.45	V Q	.	.	.	.
9.583	8.4682	76.45	.VQ	.	.	.	.
9.667	9.0199	80.10	.VQ	.	.	.	.
9.750	9.5946	83.45	.VQ	.	.	.	.
9.833	10.1906	86.53	.VQ	.	.	.	.
9.917	10.8061	89.38	.VQ	.	.	.	.
10.000	11.4399	92.02	.V Q	.	.	.	.
10.083	12.0905	94.47	.V Q	.	.	.	.
10.167	12.7570	96.77	.V Q	.	.	.	.
10.250	13.4382	98.92	.V Q	.	.	.	.
10.333	14.1335	100.95	.V Q	.	.	.	.
10.417	14.8419	102.87	.V Q	.	.	.	.
10.500	15.5630	104.69	.V Q	.	.	.	.
10.583	16.2960	106.44	.V Q	.	.	.	.
10.667	17.0406	108.12	. VQ	.	.	.	.
10.750	17.7964	109.73	. VQ	.	.	.	.
10.833	18.5629	111.30	. VQ	.	.	.	.
10.917	19.3400	112.83	. VQ	.	.	.	.
11.000	20.1274	114.33	. VQ	.	.	.	.
11.083	20.9249	115.80	. VQ	.	.	.	.
11.167	21.7323	117.24	. VQ	.	.	.	.

11.250	22.5497	118.68	. VQ	.	.	.
11.333	23.3768	120.11	. V Q	.	.	.
11.417	24.2138	121.53	. V Q	.	.	.
11.500	25.0606	122.95	. VQ	.	.	.
11.583	25.9172	124.38	. VQ	.	.	.
11.667	26.7838	125.82	. VQ	.	.	.
11.750	27.6603	127.27	. VQ	.	.	.
11.833	28.5469	128.74	. VQ	.	.	.
11.917	29.4438	130.23	. VQ	.	.	.
12.000	30.3511	131.74	. VQ	.	.	.
12.083	31.2694	133.33	. VQ	.	.	.
12.167	32.2009	135.26	. VQ	.	.	.
12.250	33.1509	137.94	. Q	.	.	.
12.333	34.1269	141.72	. Q	.	.	.
12.417	35.1363	146.56	. Q	.	.	.
12.500	36.1835	152.06	. VQ	.	.	.
12.583	37.2699	157.74	. VQ	.	.	.
12.667	38.3949	163.35	. VQ	.	.	.
12.750	39.5572	168.76	. VQ	.	.	.
12.833	40.7551	173.93	. VQ	.	.	.
12.917	41.9868	178.85	. Q	.	.	.
13.000	43.2510	183.56	. VQ	.	.	.
13.083	44.5463	188.09	. VQ	.	.	.
13.167	45.8717	192.45	. VQ	.	.	.
13.250	47.2262	196.67	. VQ	.	.	.
13.333	48.6090	200.78	. VQ	.	.	.
13.417	50.0195	204.81	. Q	.	.	.
13.500	51.4574	208.78	. Q	.	.	.
13.583	52.9223	212.71	. VQ	.	.	.
13.667	54.4142	216.63	. VQ	.	.	.
13.750	55.9332	220.55	. VQ	.	.	.
13.833	57.4793	224.50	. VQ	.	.	.
13.917	59.0529	228.49	. Q	.	.	.
14.000	60.6546	232.56	. Q	.	.	.
14.083	62.2849	236.73	. Q	.	.	.
14.167	63.9456	241.12	. VQ	.	.	.
14.250	65.6393	245.93	. VQ	.	.	.
14.333	67.3700	251.30	. Q	.	.	.
14.417	69.1415	257.23	. Q	.	.	.
14.500	70.9569	263.60	. Q	.	.	.
14.583	72.8181	270.24	. VQ	.	.	.
14.667	74.7292	277.49	. Q	.	.	.
14.750	76.7042	286.77	. Q	.	.	.
14.833	78.7526	297.43	. Q	.	.	.
14.917	80.8732	307.90	. VQ	.	.	.
15.000	83.0659	318.38	. Q	.	.	.
15.083	85.3325	329.12	. Q	.	.	.
15.167	87.6770	340.41	. VQ	.	.	.
15.250	90.1054	352.61	. VQ	.	.	.
15.333	92.6264	366.04	. VQ	.	.	.
15.417	95.2487	380.76	. VQ	.	.	.
15.500	97.9751	395.87	. V Q	.	.	.
15.583	100.7973	409.78	. VQ	.	.	.
15.667	103.7009	421.61	. V Q	.	.	.
15.750	106.6811	432.71	. V Q	.	.	.
15.833	109.7606	447.14	. VQ	.	.	.
15.917	112.9995	470.30	. V Q	.	.	.
16.000	116.5029	508.69	. V Q	.	.	.

16.083	120.4722	576.34	.	.	V	Q.	.	.
16.167	125.2370	691.85	.	.	V	.	Q	.
16.250	131.1284	855.43	.	.	V	.	.	Q
16.333	138.0117	999.46	.	.	V	.	.	Q
16.417	145.4789	1084.24	.	.	V	.	.	Q
16.500	153.2409	1127.04	.	.	V	.	.	Q
16.583	161.0526	1134.26	.	.	V.	.	.	Q
16.667	168.7694	1120.47	.	.	V	.	.	Q
16.750	176.3074	1094.52	.	.	.V	.	.	Q
16.833	183.5917	1057.69	.	.	.V	.	.	Q
16.917	190.5754	1014.03	.	.	.V	.	.	Q
17.000	197.2554	969.93	.	.	.V	.	.	Q
17.083	203.5508	914.10	.	.	.V	.	.	Q
17.167	209.3433	841.06	.	.	.V	.	.	Q
17.250	214.6229	766.60	.	.	.QV	.	.	.
17.333	219.4433	699.93	.	.	.Q	.	.	V
17.417	223.8490	639.69	.	.	.Q	.	.	V
17.500	227.8660	583.28	.	.	.Q	.	.	V
17.583	231.5273	531.61	.	.	.Q	.	.	V
17.667	234.8797	486.77	.	.	.Q	.	.	V
17.750	237.9642	447.87	.	.	.Q	.	.	V
17.833	240.8162	414.11	.	.	.Q	.	.	V
17.917	243.4660	384.76	.	.	.Q	.	.	V
18.000	245.9398	359.19	.	.	.Q	.	.	V
18.083	248.2592	336.78	.	.	.Q	.	.	V
18.167	250.4404	316.70	.	.	.Q	.	.	V
18.250	252.4922	297.93	.	.	.Q	.	.	V
18.333	254.4285	281.15	.	.	.Q	.	.	V
18.417	256.2720	267.67	.	.	.Q	.	.	V
18.500	258.0349	255.98	.	.	.Q	.	.	V
18.583	259.7195	244.60	.	.	.Q	.	.	V
18.667	261.3296	233.79	.	.	.Q	.	.	V
18.750	262.8700	223.66	.	.	.Q	.	.	V
18.833	264.3454	214.23	.	.	.Q	.	.	V
18.917	265.7605	205.47	.	.	.Q	.	.	V
19.000	267.1196	197.34	.	.	.Q	.	.	V
19.083	268.4267	189.79	.	.	.Q	.	.	V
19.167	269.6856	182.79	.	.	.Q	.	.	V
19.250	270.8997	176.29	.	.	.Q	.	.	V
19.333	272.0722	170.24	.	.	.Q	.	.	V
19.417	273.2060	164.63	.	.	.Q	.	.	V
19.500	274.3037	159.39	.	.	.Q	.	.	V
19.583	275.3679	154.52	.	.	.Q	.	.	V
19.667	276.4007	149.97	.	.	.Q	.	.	V
19.750	277.4043	145.72	.	.	.Q	.	.	V
19.833	278.3805	141.74	.	.	.Q	.	.	V
19.917	279.3310	138.02	.	.	.Q	.	.	V
20.000	280.2575	134.52	.	.	.Q	.	.	V
20.083	281.1614	131.24	.	.	.Q	.	.	V
20.167	282.0440	128.16	.	.	.Q	.	.	V
20.250	282.9066	125.25	.	.	.Q	.	.	V
20.333	283.7504	122.52	.	.	.Q	.	.	V
20.417	284.5764	119.93	.	.	.Q	.	.	V
20.500	285.3855	117.49	.	.	.Q	.	.	V
20.583	286.1787	115.17	.	.	.Q	.	.	V
20.667	286.9568	112.98	.	.	.Q	.	.	V
20.750	287.7206	110.90	.	.	.Q	.	.	V
20.833	288.4708	108.92	.	.	.Q	.	.	V

20.917	289.2079	107.04	. Q	.	.	.	V	.
21.000	289.9328	105.25	. Q	.	.	.	V	.
21.083	290.6459	103.54	. Q	.	.	.	V	.
21.167	291.3477	101.90	. Q	.	.	.	V	.
21.250	292.0388	100.34	. Q	.	.	.	V	.
21.333	292.7195	98.85	. Q	.	.	.	V	.
21.417	293.3905	97.42	. Q	.	.	.	V	.
21.500	294.0519	96.05	. Q	.	.	.	V	.
21.583	294.7043	94.73	. Q	.	.	.	V	.
21.667	295.3480	93.46	. Q	.	.	.	V	.
21.750	295.9832	92.24	. Q	.	.	.	V	.
21.833	296.6104	91.07	. Q	.	.	.	V	.
21.917	297.2298	89.93	. Q	.	.	.	V	.
22.000	297.8416	88.84	. Q	.	.	.	V	.
22.083	298.4462	87.79	. Q	.	.	.	V	.
22.167	299.0438	86.77	. Q	.	.	.	V	.
22.250	299.6345	85.78	. Q	.	.	.	V	.
22.333	300.2187	84.82	. Q	.	.	.	V	.
22.417	300.7965	83.90	. Q	.	.	.	V	.
22.500	301.3682	83.00	. Q	.	.	.	V	.
22.583	301.9338	82.13	. Q	.	.	.	V	.
22.667	302.4937	81.29	. Q	.	.	.	V	.
22.750	303.0479	80.47	. Q	.	.	.	V	.
22.833	303.5965	79.67	. Q	.	.	.	V	.
22.917	304.1399	78.89	. Q	.	.	.	V	.
23.000	304.6780	78.14	. Q	.	.	.	V	.
23.083	305.2111	77.40	. Q	.	.	.	V	.
23.167	305.7393	76.69	. Q	.	.	.	V	.
23.250	306.2626	75.99	. Q	.	.	.	V	.
23.333	306.7813	75.31	. Q	.	.	.	V	.
23.417	307.2954	74.65	. Q	.	.	.	V	.
23.500	307.8050	74.00	. Q	.	.	.	V	.
23.583	308.3103	73.36	. Q	.	.	.	V	.
23.667	308.8113	72.75	. Q	.	.	.	V	.
23.750	309.3081	72.14	. Q	.	.	.	V	.
23.833	309.8009	71.55	. Q	.	.	.	V	.
23.917	310.2897	70.97	. Q	.	.	.	V	.
24.000	310.7746	70.41	. Q	.	.	.	V	.
24.083	311.2553	69.79	. Q	.	.	.	V	.
24.167	311.7292	68.81	. Q	.	.	.	V	.
24.250	312.1904	66.96	. Q	.	.	.	V	.
24.333	312.6301	63.85	. Q	.	.	.	V	.
24.417	313.0515	61.18	. Q	.	.	.	V	.
24.500	313.4613	59.50	.Q	.	.	.	V	.
24.583	313.8583	57.65	.Q	.	.	.	V	.
24.667	314.2423	55.76	.Q	.	.	.	V	.
24.750	314.6134	53.87	.Q	.	.	.	V	.
24.833	314.9717	52.03	.Q	.	.	.	V	.
24.917	315.3176	50.23	.Q	.	.	.	V	.
25.000	315.6516	48.49	.Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====

0%	1505.0
10%	580.0
20%	290.0
30%	175.0
40%	110.0
50%	90.0
60%	75.0
70%	60.0
80%	50.0
90%	30.0

=====
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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED C *
* UNIT HYDROGRAPH - COMPLEX MODEL - SINGLE BASIN *
* 100-YR HC APRIL 2023 ROKAMOTO *

FILE NAME: 3C00HCC.DAT
TIME/DATE OF STUDY: 12:32 04/29/2023

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 712.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.280 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.077
LOW LOSS FRACTION = 0.113
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.52
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 1.09
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.45
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.43
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.36
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.63

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 29.762

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.853	159.668
2	10.766	768.120
3	28.672	1543.157
4	52.675	2068.557
5	74.416	1873.661
6	87.158	1098.136
7	93.709	564.555
8	97.065	289.205
9	98.337	109.639
10	98.895	48.089
11	99.407	44.103
12	99.763	30.670
13	99.941	15.336
14	100.000	5.111

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 32.9602
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 300.3448

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	425.0	850.0	1275.0	1700.0
0.083	0.0071	1.03	Q	.	.	.	.
0.167	0.0485	6.00	Q	.	.	.	.
0.250	0.1587	16.00	Q	.	.	.	.
0.333	0.3613	29.43	Q	.	.	.	.
0.417	0.6480	41.63	Q	.	.	.	.
0.500	0.9846	48.87	VQ	.	.	.	.
0.583	1.3474	52.68	VQ	.	.	.	.
0.667	1.7243	54.72	VQ	.	.	.	.
0.750	2.1073	55.62	VQ	.	.	.	.
0.833	2.4938	56.11	VQ	.	.	.	.
0.917	2.8835	56.59	VQ	.	.	.	.
1.000	3.2759	56.98	VQ	.	.	.	.
1.083	3.6703	57.27	VQ	.	.	.	.
1.167	4.0664	57.50	VQ	.	.	.	.
1.250	4.4637	57.70	VQ	.	.	.	.
1.333	4.8625	57.90	VQ	.	.	.	.
1.417	5.2626	58.10	VQ	.	.	.	.
1.500	5.6642	58.30	VQ	.	.	.	.
1.583	6.0671	58.51	VQ	.	.	.	.
1.667	6.4715	58.72	VQ	.	.	.	.
1.750	6.8774	58.93	VQ	.	.	.	.
1.833	7.2847	59.14	VQ	.	.	.	.
1.917	7.6935	59.35	.Q	.	.	.	.
2.000	8.1037	59.57	.Q	.	.	.	.
2.083	8.5155	59.79	.Q	.	.	.	.
2.167	8.9288	60.01	.Q	.	.	.	.
2.250	9.3436	60.23	.Q	.	.	.	.
2.333	9.7599	60.45	.Q	.	.	.	.
2.417	10.1778	60.68	.Q	.	.	.	.
2.500	10.5972	60.91	.Q	.	.	.	.
2.583	11.0183	61.14	.Q	.	.	.	.
2.667	11.4409	61.37	.Q	.	.	.	.
2.750	11.8652	61.60	.Q	.	.	.	.
2.833	12.2911	61.84	.Q	.	.	.	.
2.917	12.7187	62.08	.Q	.	.	.	.
3.000	13.1479	62.32	.Q	.	.	.	.
3.083	13.5788	62.57	.Q	.	.	.	.
3.167	14.0114	62.82	.Q	.	.	.	.
3.250	14.4457	63.07	.Q	.	.	.	.
3.333	14.8818	63.32	.Q	.	.	.	.
3.417	15.3196	63.57	.QV	.	.	.	.
3.500	15.7592	63.83	.QV	.	.	.	.
3.583	16.2006	64.09	.QV	.	.	.	.
3.667	16.6439	64.35	.QV	.	.	.	.
3.750	17.0889	64.62	.QV	.	.	.	.
3.833	17.5358	64.89	.QV	.	.	.	.
3.917	17.9846	65.16	.QV	.	.	.	.

4.000	18.4352	65.44	.QV	.	.	.	.
4.083	18.8878	65.71	.QV	.	.	.	.
4.167	19.3423	65.99	.QV	.	.	.	.
4.250	19.7987	66.28	.QV	.	.	.	.
4.333	20.2572	66.56	.QV	.	.	.	.
4.417	20.7176	66.86	.QV	.	.	.	.
4.500	21.1801	67.15	.QV	.	.	.	.
4.583	21.6446	67.45	.QV	.	.	.	.
4.667	22.1112	67.75	.QV	.	.	.	.
4.750	22.5798	68.05	.Q V	.	.	.	.
4.833	23.0506	68.36	.Q V	.	.	.	.
4.917	23.5236	68.67	.Q V	.	.	.	.
5.000	23.9987	68.99	.Q V	.	.	.	.
5.083	24.4760	69.30	.Q V	.	.	.	.
5.167	24.9555	69.63	.Q V	.	.	.	.
5.250	25.4373	69.95	.Q V	.	.	.	.
5.333	25.9213	70.28	.Q V	.	.	.	.
5.417	26.4077	70.62	.Q V	.	.	.	.
5.500	26.8964	70.96	.Q V	.	.	.	.
5.583	27.3874	71.30	.Q V	.	.	.	.
5.667	27.8809	71.65	.Q V	.	.	.	.
5.750	28.3767	72.00	.Q V	.	.	.	.
5.833	28.8750	72.36	.Q V	.	.	.	.
5.917	29.3759	72.72	.Q V	.	.	.	.
6.000	29.8792	73.08	.Q V	.	.	.	.
6.083	30.3850	73.45	.Q V	.	.	.	.
6.167	30.8935	73.83	.Q V	.	.	.	.
6.250	31.4046	74.21	.Q V	.	.	.	.
6.333	31.9183	74.59	.Q V	.	.	.	.
6.417	32.4348	74.99	.Q V	.	.	.	.
6.500	32.9539	75.38	.Q V	.	.	.	.
6.583	33.4758	75.78	.Q V	.	.	.	.
6.667	34.0006	76.19	.Q V	.	.	.	.
6.750	34.5282	76.60	.Q V	.	.	.	.
6.833	35.0586	77.02	.Q V	.	.	.	.
6.917	35.5920	77.45	.Q V	.	.	.	.
7.000	36.1284	77.88	.Q V	.	.	.	.
7.083	36.6677	78.32	.Q V	.	.	.	.
7.167	37.2102	78.76	.Q V	.	.	.	.
7.250	37.7557	79.21	.Q V	.	.	.	.
7.333	38.3044	79.67	.Q V	.	.	.	.
7.417	38.8562	80.13	.Q V	.	.	.	.
7.500	39.4114	80.60	.Q V	.	.	.	.
7.583	39.9698	81.08	.Q V	.	.	.	.
7.667	40.5315	81.57	.Q V	.	.	.	.
7.750	41.0967	82.06	.Q V	.	.	.	.
7.833	41.6653	82.56	.Q V	.	.	.	.
7.917	42.2374	83.07	.Q V	.	.	.	.
8.000	42.8131	83.59	.Q V	.	.	.	.
8.083	43.3924	84.11	.Q V	.	.	.	.
8.167	43.9754	84.65	.Q V	.	.	.	.
8.250	44.5621	85.19	. Q V	.	.	.	.
8.333	45.1526	85.75	. Q V	.	.	.	.
8.417	45.7470	86.31	. Q V	.	.	.	.
8.500	46.3454	86.88	. Q V	.	.	.	.
8.583	46.9477	87.46	. Q V	.	.	.	.
8.667	47.5542	88.05	. Q V	.	.	.	.
8.750	48.1647	88.66	. Q V	.	.	.	.

8.833	48.7795	89.27	. Q	V .	.	.	.
8.917	49.3986	89.89	. Q	V .	.	.	.
9.000	50.0221	90.53	. Q	V .	.	.	.
9.083	50.6501	91.18	. Q	V .	.	.	.
9.167	51.2826	91.84	. Q	V .	.	.	.
9.250	51.9197	92.51	. Q	V .	.	.	.
9.333	52.5615	93.20	. Q	V .	.	.	.
9.417	53.2082	93.90	. Q	V .	.	.	.
9.500	53.8598	94.61	. Q	V .	.	.	.
9.583	54.5163	95.33	. Q	V .	.	.	.
9.667	55.1780	96.08	. Q	V .	.	.	.
9.750	55.8449	96.83	. Q	V .	.	.	.
9.833	56.5171	97.61	. Q	V .	.	.	.
9.917	57.1948	98.39	. Q	V .	.	.	.
10.000	57.8780	99.20	. Q	V .	.	.	.
10.083	58.5668	100.02	. Q	V .	.	.	.
10.167	59.2615	100.86	. Q	V .	.	.	.
10.250	59.9621	101.72	. Q	V .	.	.	.
10.333	60.6687	102.60	. Q	V .	.	.	.
10.417	61.3815	103.50	. Q	V .	.	.	.
10.500	62.1007	104.42	. Q	V .	.	.	.
10.583	62.8263	105.36	. Q	V .	.	.	.
10.667	63.5585	106.32	. Q	V .	.	.	.
10.750	64.2976	107.31	. Q	V .	.	.	.
10.833	65.0436	108.32	. Q	V .	.	.	.
10.917	65.7968	109.36	. Q	V .	.	.	.
11.000	66.5572	110.42	. Q	V .	.	.	.
11.083	67.3252	111.51	. Q	V .	.	.	.
11.167	68.1009	112.63	. Q	V .	.	.	.
11.250	68.8844	113.77	. Q	V .	.	.	.
11.333	69.6761	114.95	. Q	V .	.	.	.
11.417	70.4761	116.16	. Q	V .	.	.	.
11.500	71.2847	117.41	. Q	V .	.	.	.
11.583	72.1021	118.68	. Q	V .	.	.	.
11.667	72.9285	120.00	. Q	V .	.	.	.
11.750	73.7643	121.35	. Q	V .	.	.	.
11.833	74.6097	122.75	. Q	V .	.	.	.
11.917	75.4650	124.19	. Q	V .	.	.	.
12.000	76.3304	125.67	. Q	V .	.	.	.
12.083	77.2110	127.86	. Q	V .	.	.	.
12.167	78.1243	132.61	. Q	V .	.	.	.
12.250	79.0929	140.63	. Q	V .	.	.	.
12.333	80.1321	150.90	. Q	V .	.	.	.
12.417	81.2370	160.44	. Q	V .	.	.	.
12.500	82.3862	166.86	. Q	V .	.	.	.
12.583	83.5650	171.16	. Q	.V	.	.	.
12.667	84.7661	174.40	. Q	.V	.	.	.
12.750	85.9849	176.97	. Q	.V	.	.	.
12.833	87.2202	179.36	. Q	.V	.	.	.
12.917	88.4725	181.82	. Q	.V	.	.	.
13.000	89.7418	184.31	. Q	.V	.	.	.
13.083	91.0286	186.83	. Q	.V	.	.	.
13.167	92.3330	189.41	. Q	.V	.	.	.
13.250	93.6558	192.06	. Q	.V	.	.	.
13.333	94.9976	194.83	. Q	.V	.	.	.
13.417	96.3593	197.72	. Q	.V	.	.	.
13.500	97.7418	200.74	. Q	.V	.	.	.
13.583	99.1460	203.89	. Q	.V	.	.	.

13.667	100.5729	207.19	. Q	. V	.	.	.
13.750	102.0237	210.65	. Q	. V	.	.	.
13.833	103.4995	214.29	. Q	. V	.	.	.
13.917	105.0017	218.12	. Q	. V	.	.	.
14.000	106.5317	222.15	. Q	. V	.	.	.
14.083	108.0937	226.81	. Q	. V	.	.	.
14.167	109.7001	233.24	. Q	. V	.	.	.
14.250	111.3661	241.90	. Q	. V	.	.	.
14.333	113.1028	252.18	. Q	. V	.	.	.
14.417	114.9092	262.29	. Q	. V	.	.	.
14.500	116.7744	270.82	. Q	. V	.	.	.
14.583	118.6918	278.41	. Q	. V	.	.	.
14.667	120.6599	285.77	. Q	. V	.	.	.
14.750	122.6790	293.17	. Q	. V	.	.	.
14.833	124.7521	301.01	. Q	. V	.	.	.
14.917	126.8836	309.50	. Q	. V	.	.	.
15.000	129.0787	318.73	. Q	. V	.	.	.
15.083	131.3432	328.80	. Q	. V	.	.	.
15.167	133.6842	339.92	. Q	. V	.	.	.
15.250	136.1102	352.26	. Q	. V	.	.	.
15.333	138.6318	366.13	. Q	. V	.	.	.
15.417	141.2500	380.16	. Q	. V	.	.	.
15.500	143.9366	390.10	. Q	. V	.	.	.
15.583	146.6557	394.81	. Q	. V	.	.	.
15.667	149.3973	398.08	. Q	. V	.	.	.
15.750	152.2181	409.57	. Q	. V	.	.	.
15.833	155.2442	439.39	. Q	. V	.	.	.
15.917	158.6326	492.01	. Q	. V	.	.	.
16.000	162.6359	581.27	. Q	. V	.	.	.
16.083	167.9574	772.68	.	. Q . V	.	.	.
16.167	175.7886	1137.09	.	.	. V Q	.	.
16.250	186.1959	1511.15	.	.	. V	.	. Q
16.333	197.8159	1687.22	.	.	. V	.	. Q
16.417	208.1796	1504.81	.	.	. V	.	. Q
16.500	215.6511	1084.87	.	.	. Q V	.	.
16.583	220.9790	773.61	.	.	. Q . V	.	.
16.667	225.0583	592.31	.	. Q	.	. V	.
16.750	228.3283	474.81	.	. Q	.	. V	.
16.833	231.1812	414.24	.	. Q	.	. V	.
16.917	233.8134	382.19	.	. Q	.	. V	.
17.000	236.2352	351.65	.	. Q	.	. V	.
17.083	238.4622	323.37	.	. Q	.	. V	.
17.167	240.5218	299.04	.	. Q	.	. V	.
17.250	242.4370	278.09	.	. Q	.	. V	.
17.333	244.2284	260.10	.	. Q	.	. V	.
17.417	245.9111	244.33	.	. Q	.	. V	.
17.500	247.5075	231.80	.	. Q	.	. V	.
17.583	249.0343	221.69	.	. Q	.	. V	.
17.667	250.5025	213.19	.	. Q	.	. V	.
17.750	251.9206	205.90	.	. Q	.	. V	.
17.833	253.2939	199.40	.	. Q	.	. V	.
17.917	254.6263	193.47	.	. Q	.	. V	.
18.000	255.9214	188.05	.	. Q	.	. V	.
18.083	257.1777	182.41	.	. Q	.	. V	.
18.167	258.3806	174.66	.	. Q	.	. V	.
18.250	259.5105	164.07	.	. Q	.	. V	.
18.333	260.5548	151.63	.	. Q	.	. V	.
18.417	261.5211	140.30	.	. Q	.	. V	.

18.500	262.4333	132.45	. Q	.	.	.	V	.
18.583	263.3082	127.03	. Q	.	.	.	V	.
18.667	264.1549	122.95	. Q	.	.	.	V	.
18.750	264.9798	119.78	. Q	.	.	.	V	.
18.833	265.7858	117.02	. Q	.	.	.	V	.
18.917	266.5738	114.42	. Q	.	.	.	V	.
19.000	267.3451	112.00	. Q	.	.	.	V	.
19.083	268.1010	109.76	. Q	.	.	.	V	.
19.167	268.8425	107.67	. Q	.	.	.	V	.
19.250	269.5704	105.70	. Q	.	.	.	V	.
19.333	270.2854	103.82	. Q	.	.	.	V	.
19.417	270.9881	102.02	. Q	.	.	.	V	.
19.500	271.6789	100.31	. Q	.	.	.	V	.
19.583	272.3584	98.66	. Q	.	.	.	V	.
19.667	273.0271	97.09	. Q	.	.	.	V	.
19.750	273.6853	95.58	. Q	.	.	.	V	.
19.833	274.3336	94.13	. Q	.	.	.	V	.
19.917	274.9722	92.73	. Q	.	.	.	V	.
20.000	275.6016	91.39	. Q	.	.	.	V	.
20.083	276.2221	90.10	. Q	.	.	.	V	.
20.167	276.8340	88.85	. Q	.	.	.	V	.
20.250	277.4377	87.65	. Q	.	.	.	V	.
20.333	278.0333	86.49	. Q	.	.	.	V	.
20.417	278.6212	85.36	. Q	.	.	.	V	.
20.500	279.2017	84.28	.Q	.	.	.	V	.
20.583	279.7749	83.23	.Q	.	.	.	V	.
20.667	280.3411	82.21	.Q	.	.	.	V	.
20.750	280.9005	81.23	.Q	.	.	.	V	.
20.833	281.4533	80.27	.Q	.	.	.	V	.
20.917	281.9998	79.35	.Q	.	.	.	V	.
21.000	282.5400	78.45	.Q	.	.	.	V	.
21.083	283.0743	77.57	.Q	.	.	.	V	.
21.167	283.6027	76.73	.Q	.	.	.	V	.
21.250	284.1254	75.90	.Q	.	.	.	V	.
21.333	284.6426	75.10	.Q	.	.	.	V	.
21.417	285.1545	74.32	.Q	.	.	.	V	.
21.500	285.6611	73.56	.Q	.	.	.	V	.
21.583	286.1626	72.82	.Q	.	.	.	V	.
21.667	286.6592	72.10	.Q	.	.	.	V	.
21.750	287.1509	71.40	.Q	.	.	.	V	.
21.833	287.6379	70.71	.Q	.	.	.	V	.
21.917	288.1203	70.04	.Q	.	.	.	V	.
22.000	288.5982	69.39	.Q	.	.	.	V	.
22.083	289.0717	68.76	.Q	.	.	.	V	.
22.167	289.5410	68.14	.Q	.	.	.	V	.
22.250	290.0061	67.53	.Q	.	.	.	V	.
22.333	290.4671	66.94	.Q	.	.	.	V	.
22.417	290.9241	66.36	.Q	.	.	.	V	.
22.500	291.3772	65.79	.Q	.	.	.	V	.
22.583	291.8265	65.23	.Q	.	.	.	V	.
22.667	292.2720	64.69	.Q	.	.	.	V	.
22.750	292.7139	64.16	.Q	.	.	.	V	.
22.833	293.1522	63.64	.Q	.	.	.	V	.
22.917	293.5870	63.13	.Q	.	.	.	V	.
23.000	294.0184	62.64	.Q	.	.	.	V	.
23.083	294.4464	62.15	.Q	.	.	.	V	.
23.167	294.8711	61.67	.Q	.	.	.	V	.
23.250	295.2926	61.20	.Q	.	.	.	V	.

23.333	295.7109	60.74	.Q	.	.	.	V	.
23.417	296.1261	60.29	.Q	.	.	.	V	.
23.500	296.5383	59.84	.Q	.	.	.	V	.
23.583	296.9474	59.41	.Q	.	.	.	V	.
23.667	297.3537	58.99	.Q	.	.	.	V	.
23.750	297.7570	58.57	.Q	.	.	.	V	.
23.833	298.1576	58.16	.Q	.	.	.	V	.
23.917	298.5554	57.75	.Q	.	.	.	V	.
24.000	298.9504	57.36	.Q	.	.	.	V	.
24.083	299.3356	55.94	.Q	.	.	.	V	.
24.167	299.6841	50.61	.Q	.	.	.	V	.
24.250	299.9618	40.31	Q	.	.	.	V	.
24.333	300.1456	26.69	Q	.	.	.	V	.
24.417	300.2449	14.42	Q	.	.	.	V	.
24.500	300.2948	7.24	Q	.	.	.	V	.
24.583	300.3192	3.55	Q	.	.	.	V	.
24.667	300.3306	1.66	Q	.	.	.	V	.
24.750	300.3371	0.94	Q	.	.	.	V	.
24.833	300.3413	0.62	Q	.	.	.	V	.
24.917	300.3436	0.33	Q	.	.	.	V	.
25.000	300.3445	0.13	Q	.	.	.	V	.
25.083	300.3448	0.03	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1505.0
10%	340.0
20%	115.0
30%	45.0
40%	35.0
50%	25.0
60%	25.0
70%	15.0
80%	15.0
90%	5.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 462.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.237 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.108

LOW LOSS FRACTION = 0.143
 HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.52
 SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 1.09
 SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.45
 SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 2.43
 SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 3.36
 SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 5.63

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
 30-MINUTE FACTOR = 0.942
 1-HOUR FACTOR = 0.942
 3-HOUR FACTOR = 0.991
 6-HOUR FACTOR = 0.996
 24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
 UNIT INTERVAL PERCENTAGE OF LAG-TIME = 35.162

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	2.353	131.590
2	15.158	716.266
3	39.117	1340.079
4	67.293	1575.996
5	85.247	1004.224
6	93.646	469.820
7	97.389	209.343
8	98.538	64.287
9	99.197	36.854
10	99.679	26.939
11	99.920	13.470
12	100.000	4.490

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) =		27.3454
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) =		188.9832

24 - HOUR STORM
 RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	300.0	600.0	900.0	1200.0
0.083	0.0057	0.82	Q	.	.	.	.
0.167	0.0422	5.30	Q	.	.	.	.
0.250	0.1364	13.69	Q	.	.	.	.
0.333	0.2988	23.58	Q	.	.	.	.
0.417	0.5049	29.93	Q	.	.	.	.
0.500	0.7319	32.96	VQ	.	.	.	.
0.583	0.9686	34.37	VQ	.	.	.	.
0.667	1.2089	34.89	VQ	.	.	.	.
0.750	1.4516	35.24	VQ	.	.	.	.
0.833	1.6963	35.53	VQ	.	.	.	.
0.917	1.9423	35.73	VQ	.	.	.	.
1.000	2.1894	35.88	VQ	.	.	.	.
1.083	2.4374	36.00	VQ	.	.	.	.
1.167	2.6862	36.13	VQ	.	.	.	.
1.250	2.9358	36.25	VQ	.	.	.	.
1.333	3.1864	36.38	VQ	.	.	.	.
1.417	3.4378	36.50	VQ	.	.	.	.
1.500	3.6901	36.63	VQ	.	.	.	.
1.583	3.9432	36.76	VQ	.	.	.	.
1.667	4.1973	36.89	VQ	.	.	.	.
1.750	4.4523	37.02	VQ	.	.	.	.
1.833	4.7082	37.16	VQ	.	.	.	.
1.917	4.9651	37.29	.Q	.	.	.	.
2.000	5.2228	37.43	.Q	.	.	.	.
2.083	5.4816	37.57	.Q	.	.	.	.
2.167	5.7412	37.71	.Q	.	.	.	.
2.250	6.0019	37.84	.Q	.	.	.	.
2.333	6.2635	37.99	.Q	.	.	.	.
2.417	6.5261	38.13	.Q	.	.	.	.
2.500	6.7896	38.27	.Q	.	.	.	.
2.583	7.0542	38.42	.Q	.	.	.	.
2.667	7.3198	38.56	.Q	.	.	.	.
2.750	7.5864	38.71	.Q	.	.	.	.
2.833	7.8541	38.86	.Q	.	.	.	.
2.917	8.1227	39.01	.Q	.	.	.	.
3.000	8.3925	39.17	.Q	.	.	.	.
3.083	8.6632	39.32	.Q	.	.	.	.
3.167	8.9351	39.48	.Q	.	.	.	.
3.250	9.2081	39.63	.Q	.	.	.	.
3.333	9.4821	39.79	.QV	.	.	.	.
3.417	9.7573	39.95	.QV	.	.	.	.
3.500	10.0336	40.12	.QV	.	.	.	.
3.583	10.3110	40.28	.QV	.	.	.	.
3.667	10.5895	40.45	.QV	.	.	.	.
3.750	10.8692	40.61	.QV	.	.	.	.
3.833	11.1501	40.78	.QV	.	.	.	.
3.917	11.4322	40.95	.QV	.	.	.	.

4.000	11.7154	41.13	.QV	.	.	.	.
4.083	11.9999	41.30	.QV	.	.	.	.
4.167	12.2855	41.48	.QV	.	.	.	.
4.250	12.5724	41.66	.QV	.	.	.	.
4.333	12.8606	41.84	.QV	.	.	.	.
4.417	13.1500	42.02	.QV	.	.	.	.
4.500	13.4407	42.21	.QV	.	.	.	.
4.583	13.7327	42.40	.QV	.	.	.	.
4.667	14.0260	42.59	.QV	.	.	.	.
4.750	14.3206	42.78	.Q V	.	.	.	.
4.833	14.6166	42.97	.Q V	.	.	.	.
4.917	14.9139	43.17	.Q V	.	.	.	.
5.000	15.2125	43.37	.Q V	.	.	.	.
5.083	15.5126	43.57	.Q V	.	.	.	.
5.167	15.8141	43.77	.Q V	.	.	.	.
5.250	16.1170	43.98	.Q V	.	.	.	.
5.333	16.4213	44.19	.Q V	.	.	.	.
5.417	16.7271	44.40	.Q V	.	.	.	.
5.500	17.0343	44.61	.Q V	.	.	.	.
5.583	17.3431	44.83	.Q V	.	.	.	.
5.667	17.6533	45.05	.Q V	.	.	.	.
5.750	17.9651	45.27	.Q V	.	.	.	.
5.833	18.2784	45.50	.Q V	.	.	.	.
5.917	18.5933	45.72	.Q V	.	.	.	.
6.000	18.9098	45.96	.Q V	.	.	.	.
6.083	19.2279	46.19	.Q V	.	.	.	.
6.167	19.5476	46.43	.Q V	.	.	.	.
6.250	19.8690	46.67	.Q V	.	.	.	.
6.333	20.1921	46.91	.Q V	.	.	.	.
6.417	20.5169	47.16	.Q V	.	.	.	.
6.500	20.8434	47.41	.Q V	.	.	.	.
6.583	21.1716	47.66	.Q V	.	.	.	.
6.667	21.5016	47.92	.Q V	.	.	.	.
6.750	21.8334	48.18	.Q V	.	.	.	.
6.833	22.1671	48.44	.Q V	.	.	.	.
6.917	22.5025	48.71	.Q V	.	.	.	.
7.000	22.8399	48.99	.Q V	.	.	.	.
7.083	23.1792	49.26	.Q V	.	.	.	.
7.167	23.5204	49.54	.Q V	.	.	.	.
7.250	23.8635	49.82	.Q V	.	.	.	.
7.333	24.2087	50.12	.Q V	.	.	.	.
7.417	24.5558	50.41	.Q V	.	.	.	.
7.500	24.9051	50.71	.Q V	.	.	.	.
7.583	25.2563	51.01	.Q V	.	.	.	.
7.667	25.6098	51.32	.Q V	.	.	.	.
7.750	25.9653	51.63	.Q V	.	.	.	.
7.833	26.3231	51.95	.Q V	.	.	.	.
7.917	26.6830	52.27	.Q V	.	.	.	.
8.000	27.0453	52.60	.Q V	.	.	.	.
8.083	27.4098	52.93	.Q V	.	.	.	.
8.167	27.7766	53.27	.Q V	.	.	.	.
8.250	28.1458	53.61	.Q V	.	.	.	.
8.333	28.5175	53.96	.Q V	.	.	.	.
8.417	28.8915	54.31	.Q V	.	.	.	.
8.500	29.2681	54.68	.Q V	.	.	.	.
8.583	29.6472	55.04	.Q V	.	.	.	.
8.667	30.0289	55.42	.Q V	.	.	.	.
8.750	30.4132	55.80	.Q V	.	.	.	.

8.833	30.8002	56.19	.Q	V	.	.	.
8.917	31.1899	56.58	.Q	V	.	.	.
9.000	31.5824	56.99	.Q	V	.	.	.
9.083	31.9776	57.40	.Q	V	.	.	.
9.167	32.3758	57.82	.Q	V	.	.	.
9.250	32.7770	58.24	.Q	V	.	.	.
9.333	33.1811	58.68	.Q	V	.	.	.
9.417	33.5882	59.12	.Q	V	.	.	.
9.500	33.9985	59.57	.Q	V	.	.	.
9.583	34.4120	60.03	.Q	V	.	.	.
9.667	34.8286	60.50	.Q	V	.	.	.
9.750	35.2486	60.98	.Q	V	.	.	.
9.833	35.6720	61.47	.Q	V	.	.	.
9.917	36.0988	61.97	.Q	V	.	.	.
10.000	36.5291	62.49	.Q	V	.	.	.
10.083	36.9630	63.00	.Q	V	.	.	.
10.167	37.4007	63.54	.Q	V	.	.	.
10.250	37.8420	64.08	.Q	V	.	.	.
10.333	38.2872	64.64	.Q	V	.	.	.
10.417	38.7363	65.21	.Q	V	.	.	.
10.500	39.1895	65.80	.Q	V	.	.	.
10.583	39.6467	66.39	.Q	V	.	.	.
10.667	40.1082	67.01	.Q	V	.	.	.
10.750	40.5739	67.63	.Q	V	.	.	.
10.833	41.0442	68.28	.Q	V	.	.	.
10.917	41.5189	68.93	.Q	V	.	.	.
11.000	41.9983	69.61	.Q	V	.	.	.
11.083	42.4824	70.30	.Q	V	.	.	.
11.167	42.9715	71.01	.Q	V	.	.	.
11.250	43.4655	71.74	.Q	V	.	.	.
11.333	43.9648	72.49	.Q	V	.	.	.
11.417	44.4693	73.26	.Q	V	.	.	.
11.500	44.9793	74.05	.Q	V	.	.	.
11.583	45.4949	74.86	.Q	V	.	.	.
11.667	46.0163	75.71	.Q	V	.	.	.
11.750	46.5435	76.56	.Q	V	.	.	.
11.833	47.0770	77.46	.Q	V	.	.	.
11.917	47.6167	78.37	.Q	V	.	.	.
12.000	48.1630	79.32	.Q	V	.	.	.
12.083	48.7195	80.81	.Q	V	.	.	.
12.167	49.3027	84.69	.Q	V	.	.	.
12.250	49.9300	91.08	.Q	V	.	.	.
12.333	50.6083	98.48	.Q	V	.	.	.
12.417	51.3221	103.64	.Q	V	.	.	.
12.500	52.0572	106.74	.Q	.V	.	.	.
12.583	52.8066	108.82	.Q	.V	.	.	.
12.667	53.5670	110.40	.Q	.V	.	.	.
12.750	54.3375	111.89	.Q	.V	.	.	.
12.833	55.1186	113.41	.Q	.V	.	.	.
12.917	55.9100	114.91	.Q	.V	.	.	.
13.000	56.7120	116.45	.Q	.V	.	.	.
13.083	57.5247	118.01	.Q	.V	.	.	.
13.167	58.3488	119.66	.Q	.V	.	.	.
13.250	59.1845	121.34	.Q	.V	.	.	.
13.333	60.0325	123.13	.Q	.V	.	.	.
13.417	60.8932	124.97	.Q	.V	.	.	.
13.500	61.7673	126.92	.Q	.V	.	.	.
13.583	62.6552	128.93	.Q	.V	.	.	.

13.667	63.5579	131.07	. Q	. V	.	.	.
13.750	64.4758	133.28	. Q	. V	.	.	.
13.833	65.4099	135.64	. Q	. V	.	.	.
13.917	66.3609	138.08	. Q	. V	.	.	.
14.000	67.3299	140.70	. Q	. V	.	.	.
14.083	68.3198	143.74	. Q	. V	.	.	.
14.167	69.3420	148.42	. Q	. V	.	.	.
14.250	70.4077	154.73	. Q	. V	.	.	.
14.333	71.5225	161.88	. Q	. V	.	.	.
14.417	72.6781	167.79	. Q	. V	.	.	.
14.500	73.8675	172.70	. Q	. V	.	.	.
14.583	75.0877	177.19	. Q	. V	.	.	.
14.667	76.3390	181.69	. Q	. V	.	.	.
14.750	77.6227	186.39	. Q	. V	.	.	.
14.833	78.9417	191.53	. Q	. V	.	.	.
14.917	80.2985	197.00	. Q	. V	.	.	.
15.000	81.6969	203.06	. Q	. V	.	.	.
15.083	83.1405	209.60	. Q	. V	.	.	.
15.167	84.6348	216.98	. Q	. V	.	.	.
15.250	86.1850	225.08	. Q	. V	.	.	.
15.333	87.7991	234.37	. Q	. V	.	.	.
15.417	89.4756	243.43	. Q	. V	.	.	.
15.500	91.1859	248.33	. Q	. V	.	.	.
15.583	92.8987	248.71	. Q	. V	.	.	.
15.667	94.6188	249.75	. Q	. V	.	.	.
15.750	96.4133	260.57	. Q	. V	.	.	.
15.833	98.3749	284.82	. Q	. V	.	.	.
15.917	100.6107	324.63	. Q	. V	.	.	.
16.000	103.3270	394.42	. Q	. V	.	.	.
16.083	107.0873	545.99	.	. Q	. V	.	.
16.167	113.0027	858.92	.	.	. V	. Q	.
16.250	120.7430	1123.90	.	.	. V	.	. Q
16.333	128.6903	1153.94	.	.	.	. V	. Q
16.417	134.5060	844.44	.	.	.	. Q	.
16.500	138.3225	554.16	.	.	. Q	. V	.
16.583	141.0349	393.84	.	. Q	.	. V	.
16.667	143.1336	304.74	. Q	.	.	. V	.
16.750	144.9904	269.60	. Q	.	.	. V	.
16.833	146.6801	245.34	. Q	.	.	. V	.
16.917	148.2156	222.96	. Q	.	.	. V	.
17.000	149.6264	204.85	. Q	.	.	. V	.
17.083	150.9415	190.94	. Q	.	.	. V	.
17.167	152.1770	179.40	. Q	.	.	. V	.
17.250	153.3326	167.80	. Q	.	.	. V	.
17.333	154.4118	156.70	. Q	.	.	. V	.
17.417	155.4302	147.87	. Q	.	.	. V	.
17.500	156.4017	141.06	. Q	.	.	. V	.
17.583	157.3348	135.49	. Q	.	.	. V	.
17.667	158.2355	130.78	. Q	.	.	. V	.
17.750	159.1072	126.56	. Q	.	.	. V	.
17.833	159.9524	122.72	. Q	.	.	. V	.
17.917	160.7736	119.23	. Q	.	.	. V	.
18.000	161.5727	116.03	. Q	.	.	. V	.
18.083	162.3479	112.56	. Q	.	.	. V	.
18.167	163.0846	106.97	. Q	.	.	. V	.
18.250	163.7670	99.09	. Q	.	.	. V	.
18.333	164.3901	90.47	. Q	.	.	. V	.
18.417	164.9708	84.32	. Q	.	.	. V	.

18.500	165.5250	80.46	. Q	.	.	.	. V	.
18.583	166.0606	77.77	. Q	.	.	.	. V	.
18.667	166.5824	75.77	. Q	.	.	.	. V	.
18.750	167.0919	73.98	. Q	.	.	.	. V	.
18.833	167.5900	72.32	. Q	.	.	.	. V	.
18.917	168.0776	70.80	. Q	.	.	.	. V	.
19.000	168.5554	69.39	. Q	.	.	.	. V	.
19.083	169.0242	68.06	. Q	.	.	.	. V	.
19.167	169.4842	66.80	. Q	.	.	.	. V	.
19.250	169.9360	65.60	. Q	.	.	.	. V	.
19.333	170.3799	64.45	. Q	.	.	.	. V	.
19.417	170.8162	63.36	. Q	.	.	.	. V	.
19.500	171.2453	62.31	. Q	.	.	.	. V	.
19.583	171.6675	61.30	. Q	.	.	.	. V	.
19.667	172.0831	60.34	. Q	.	.	.	. V	.
19.750	172.4923	59.41	. Q	.	.	.	. V	.
19.833	172.8953	58.52	. Q	.	.	.	. V	.
19.917	173.2925	57.67	. Q	.	.	.	. V	.
20.000	173.6840	56.85	. Q	.	.	.	. V	.
20.083	174.0700	56.05	. Q	.	.	.	. V	.
20.167	174.4508	55.29	. Q	.	.	.	. V	.
20.250	174.8265	54.55	. Q	.	.	.	. V	.
20.333	175.1972	53.83	. Q	.	.	.	. V	.
20.417	175.5632	53.14	. Q	.	.	.	. V	.
20.500	175.9246	52.47	. Q	.	.	.	. V	.
20.583	176.2816	51.83	. Q	.	.	.	. V	.
20.667	176.6342	51.20	. Q	.	.	.	. V	.
20.750	176.9827	50.60	. Q	.	.	.	. V	.
20.833	177.3271	50.01	. Q	.	.	.	. V	.
20.917	177.6676	49.44	. Q	.	.	.	. V	.
21.000	178.0042	48.88	. Q	.	.	.	. V	.
21.083	178.3372	48.34	. Q	.	.	.	. V	.
21.167	178.6665	47.82	. Q	.	.	.	. V	.
21.250	178.9923	47.31	. Q	.	.	.	. V	.
21.333	179.3148	46.82	. Q	.	.	.	. V	.
21.417	179.6339	46.34	. Q	.	.	.	. V	.
21.500	179.9498	45.87	. Q	.	.	.	. V	.
21.583	180.2625	45.41	. Q	.	.	.	. V	.
21.667	180.5722	44.96	. Q	.	.	.	. V	.
21.750	180.8789	44.53	. Q	.	.	.	. V	.
21.833	181.1826	44.11	. Q	.	.	.	. V	.
21.917	181.4836	43.69	. Q	.	.	.	. V	.
22.000	181.7817	43.29	. Q	.	.	.	. V	.
22.083	182.0771	42.90	. Q	.	.	.	. V	.
22.167	182.3699	42.51	. Q	.	.	.	. V	.
22.250	182.6601	42.14	. Q	.	.	.	. V	.
22.333	182.9478	41.77	. Q	.	.	.	. V	.
22.417	183.2330	41.41	. Q	.	.	.	. V	.
22.500	183.5158	41.06	. Q	.	.	.	. V	.
22.583	183.7962	40.72	. Q	.	.	.	. V	.
22.667	184.0743	40.38	. Q	.	.	.	. V	.
22.750	184.3501	40.05	. Q	.	.	.	. V	.
22.833	184.6238	39.73	. Q	.	.	.	. V	.
22.917	184.8952	39.41	. Q	.	.	.	. V	.
23.000	185.1645	39.11	. Q	.	.	.	. V	.
23.083	185.4318	38.80	. Q	.	.	.	. V	.
23.167	185.6970	38.51	. Q	.	.	.	. V	.
23.250	185.9602	38.22	. Q	.	.	.	. V	.

23.333	186.2214	37.93	.Q	.	.	.	V.
23.417	186.4807	37.65	.Q	.	.	.	V.
23.500	186.7381	37.38	.Q	.	.	.	V.
23.583	186.9936	37.11	.Q	.	.	.	V.
23.667	187.2474	36.84	.Q	.	.	.	V.
23.750	187.4993	36.58	.Q	.	.	.	V.
23.833	187.7495	36.33	.Q	.	.	.	V.
23.917	187.9980	36.08	.Q	.	.	.	V.
24.000	188.2448	35.83	.Q	.	.	.	V.
24.083	188.4842	34.77	.Q	.	.	.	V.
24.167	188.6913	30.07	.Q	.	.	.	V.
24.250	188.8395	21.52	Q	.	.	.	V.
24.333	188.9190	11.55	Q	.	.	.	V.
24.417	188.9549	5.21	Q	.	.	.	V.
24.500	188.9703	2.24	Q	.	.	.	V.
24.583	188.9767	0.92	Q	.	.	.	V.
24.667	188.9802	0.52	Q	.	.	.	V.
24.750	188.9822	0.28	Q	.	.	.	V.
24.833	188.9830	0.11	Q	.	.	.	V.
24.917	188.9832	0.03	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1495.0
10%	305.0
20%	95.0
30%	40.0
40%	30.0
50%	20.0
60%	20.0
70%	20.0
80%	10.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #3)

WATERSHED AREA = 117.200 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.352 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.224
LOW LOSS FRACTION = 0.148
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.52
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 1.09
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.45
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 2.43
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 3.36
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 5.63

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 23.674

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.401	19.855
2	6.602	73.728
3	18.771	172.476
4	34.746	226.429
5	54.752	283.556
6	72.421	250.447
7	83.915	162.916
8	90.752	96.896
9	94.911	58.960
10	97.204	32.500
11	98.255	14.885
12	98.699	6.292
13	99.142	6.292
14	99.586	6.292
15	100.000	5.862

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 7.5382
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 47.2809

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	75.0	150.0	225.0	300.0
0.083	0.0008	0.12	Q	.	.	.	.
0.167	0.0049	0.58	Q	.	.	.	.
0.250	0.0163	1.65	Q	.	.	.	.
0.333	0.0374	3.07	Q	.	.	.	.
0.417	0.0707	4.84	Q	.	.	.	.
0.500	0.1148	6.41	Q	.	.	.	.
0.583	0.1661	7.44	Q	.	.	.	.
0.667	0.2216	8.07	VQ	.	.	.	.
0.750	0.2799	8.46	VQ	.	.	.	.
0.833	0.3397	8.69	VQ	.	.	.	.
0.917	0.4004	8.81	VQ	.	.	.	.
1.000	0.4616	8.88	VQ	.	.	.	.
1.083	0.5232	8.95	VQ	.	.	.	.
1.167	0.5853	9.02	VQ	.	.	.	.
1.250	0.6479	9.09	VQ	.	.	.	.
1.333	0.7107	9.12	VQ	.	.	.	.
1.417	0.7737	9.15	VQ	.	.	.	.
1.500	0.8370	9.18	VQ	.	.	.	.
1.583	0.9004	9.21	VQ	.	.	.	.
1.667	0.9641	9.25	VQ	.	.	.	.
1.750	1.0280	9.28	VQ	.	.	.	.
1.833	1.0921	9.31	VQ	.	.	.	.
1.917	1.1565	9.35	VQ	.	.	.	.
2.000	1.2211	9.38	.Q	.	.	.	.
2.083	1.2859	9.41	.Q	.	.	.	.
2.167	1.3510	9.45	.Q	.	.	.	.
2.250	1.4163	9.48	.Q	.	.	.	.
2.333	1.4819	9.52	.Q	.	.	.	.
2.417	1.5477	9.55	.Q	.	.	.	.
2.500	1.6137	9.59	.Q	.	.	.	.
2.583	1.6800	9.63	.Q	.	.	.	.
2.667	1.7465	9.66	.Q	.	.	.	.
2.750	1.8133	9.70	.Q	.	.	.	.
2.833	1.8804	9.74	.Q	.	.	.	.
2.917	1.9477	9.77	.Q	.	.	.	.
3.000	2.0153	9.81	.Q	.	.	.	.
3.083	2.0831	9.85	.Q	.	.	.	.
3.167	2.1512	9.89	.Q	.	.	.	.
3.250	2.2196	9.93	.Q	.	.	.	.
3.333	2.2882	9.97	.Q	.	.	.	.
3.417	2.3571	10.01	.Q	.	.	.	.
3.500	2.4263	10.05	.QV	.	.	.	.
3.583	2.4958	10.09	.QV	.	.	.	.
3.667	2.5656	10.13	.QV	.	.	.	.
3.750	2.6356	10.17	.QV	.	.	.	.
3.833	2.7059	10.21	.QV	.	.	.	.
3.917	2.7766	10.26	.QV	.	.	.	.

4.000	2.8475	10.30	.QV	.	.	.	.
4.083	2.9187	10.34	.QV	.	.	.	.
4.167	2.9902	10.39	.QV	.	.	.	.
4.250	3.0621	10.43	.QV	.	.	.	.
4.333	3.1342	10.47	.QV	.	.	.	.
4.417	3.2067	10.52	.QV	.	.	.	.
4.500	3.2794	10.57	.QV	.	.	.	.
4.583	3.3525	10.61	.QV	.	.	.	.
4.667	3.4259	10.66	.QV	.	.	.	.
4.750	3.4997	10.71	.QV	.	.	.	.
4.833	3.5737	10.76	.Q V	.	.	.	.
4.917	3.6481	10.80	.Q V	.	.	.	.
5.000	3.7229	10.85	.Q V	.	.	.	.
5.083	3.7980	10.90	.Q V	.	.	.	.
5.167	3.8734	10.95	.Q V	.	.	.	.
5.250	3.9492	11.00	.Q V	.	.	.	.
5.333	4.0254	11.06	.Q V	.	.	.	.
5.417	4.1019	11.11	.Q V	.	.	.	.
5.500	4.1787	11.16	.Q V	.	.	.	.
5.583	4.2560	11.22	.Q V	.	.	.	.
5.667	4.3336	11.27	.Q V	.	.	.	.
5.750	4.4116	11.32	.Q V	.	.	.	.
5.833	4.4899	11.38	.Q V	.	.	.	.
5.917	4.5687	11.44	.Q V	.	.	.	.
6.000	4.6479	11.49	.Q V	.	.	.	.
6.083	4.7274	11.55	.Q V	.	.	.	.
6.167	4.8074	11.61	.Q V	.	.	.	.
6.250	4.8877	11.67	.Q V	.	.	.	.
6.333	4.9685	11.73	.Q V	.	.	.	.
6.417	5.0497	11.79	.Q V	.	.	.	.
6.500	5.1313	11.85	.Q V	.	.	.	.
6.583	5.2134	11.92	.Q V	.	.	.	.
6.667	5.2959	11.98	.Q V	.	.	.	.
6.750	5.3788	12.04	.Q V	.	.	.	.
6.833	5.4622	12.11	.Q V	.	.	.	.
6.917	5.5461	12.17	.Q V	.	.	.	.
7.000	5.6304	12.24	.Q V	.	.	.	.
7.083	5.7152	12.31	.Q V	.	.	.	.
7.167	5.8004	12.38	.Q V	.	.	.	.
7.250	5.8862	12.45	.Q V	.	.	.	.
7.333	5.9724	12.52	.Q V	.	.	.	.
7.417	6.0591	12.59	.Q V	.	.	.	.
7.500	6.1463	12.67	.Q V	.	.	.	.
7.583	6.2341	12.74	.Q V	.	.	.	.
7.667	6.3224	12.82	.Q V	.	.	.	.
7.750	6.4112	12.89	.Q V	.	.	.	.
7.833	6.5005	12.97	.Q V	.	.	.	.
7.917	6.5904	13.05	.Q V	.	.	.	.
8.000	6.6808	13.13	.Q V	.	.	.	.
8.083	6.7718	13.21	.Q V	.	.	.	.
8.167	6.8634	13.30	.Q V	.	.	.	.
8.250	6.9555	13.38	.Q V	.	.	.	.
8.333	7.0483	13.47	.Q V	.	.	.	.
8.417	7.1416	13.56	.Q V	.	.	.	.
8.500	7.2356	13.64	.Q V	.	.	.	.
8.583	7.3302	13.73	.Q V	.	.	.	.
8.667	7.4254	13.83	.Q V	.	.	.	.
8.750	7.5213	13.92	.Q V	.	.	.	.

8.833	7.6178	14.01	.Q	V	.	.	.
8.917	7.7150	14.11	.Q	V	.	.	.
9.000	7.8129	14.21	.Q	V	.	.	.
9.083	7.9115	14.31	.Q	V	.	.	.
9.167	8.0107	14.41	.Q	V	.	.	.
9.250	8.1107	14.52	.Q	V	.	.	.
9.333	8.2114	14.63	.Q	V	.	.	.
9.417	8.3129	14.73	.Q	V	.	.	.
9.500	8.4152	14.84	.Q	V	.	.	.
9.583	8.5182	14.96	.Q	V	.	.	.
9.667	8.6220	15.07	.Q	V	.	.	.
9.750	8.7266	15.19	.Q	V	.	.	.
9.833	8.8320	15.31	.Q	V	.	.	.
9.917	8.9383	15.43	.Q	V	.	.	.
10.000	9.0455	15.56	.Q	V	.	.	.
10.083	9.1535	15.69	.Q	V	.	.	.
10.167	9.2624	15.81	.Q	V	.	.	.
10.250	9.3722	15.95	.Q	V	.	.	.
10.333	9.4830	16.08	.Q	V	.	.	.
10.417	9.5948	16.22	.Q	V	.	.	.
10.500	9.7075	16.37	.Q	V	.	.	.
10.583	9.8212	16.51	.Q	V	.	.	.
10.667	9.9359	16.66	.Q	V	.	.	.
10.750	10.0517	16.81	.Q	V	.	.	.
10.833	10.1686	16.97	.Q	V	.	.	.
10.917	10.2866	17.13	.Q	V	.	.	.
11.000	10.4057	17.29	.Q	V	.	.	.
11.083	10.5259	17.46	.Q	V	.	.	.
11.167	10.6474	17.63	.Q	V	.	.	.
11.250	10.7701	17.81	.Q	V	.	.	.
11.333	10.8940	17.99	.Q	V	.	.	.
11.417	11.0192	18.18	.Q	V	.	.	.
11.500	11.1457	18.37	.Q	V	.	.	.
11.583	11.2736	18.57	.Q	V	.	.	.
11.667	11.4029	18.77	.Q	V	.	.	.
11.750	11.5336	18.98	.Q	V	.	.	.
11.833	11.6658	19.19	.Q	V	.	.	.
11.917	11.7995	19.42	.Q	V	.	.	.
12.000	11.9348	19.64	.Q	V	.	.	.
12.083	12.0723	19.96	.Q	V	.	.	.
12.167	12.2134	20.49	.Q	V	.	.	.
12.250	12.3610	21.43	.Q	V	.	.	.
12.333	12.5166	22.59	.Q	V	.	.	.
12.417	12.6818	23.99	.Q	V	.	.	.
12.500	12.8559	25.27	.Q	V	.	.	.
12.583	13.0364	26.22	.Q	.V	.	.	.
12.667	13.2217	26.91	.Q	.V	.	.	.
12.750	13.4109	27.47	.Q	.V	.	.	.
12.833	13.6033	27.93	.Q	.V	.	.	.
12.917	13.7985	28.34	.Q	.V	.	.	.
13.000	13.9963	28.73	.Q	.V	.	.	.
13.083	14.1970	29.13	.Q	.V	.	.	.
13.167	14.4004	29.54	.Q	.V	.	.	.
13.250	14.6068	29.97	.Q	.V	.	.	.
13.333	14.8161	30.39	.Q	.V	.	.	.
13.417	15.0285	30.84	.Q	.V	.	.	.
13.500	15.2440	31.29	.Q	.V	.	.	.
13.583	15.4628	31.77	.Q	.V	.	.	.

13.667	15.6851	32.27	.Q	.V	.	.	.
13.750	15.9110	32.80	.Q	.V	.	.	.
13.833	16.1407	33.35	.Q	.V	.	.	.
13.917	16.3744	33.93	.Q	.V	.	.	.
14.000	16.6122	34.54	.Q	.V	.	.	.
14.083	16.8549	35.23	.Q	.V	.	.	.
14.167	17.1034	36.08	.Q	.V	.	.	.
14.250	17.3597	37.22	.Q	.V	.	.	.
14.333	17.6251	38.53	.Q	.V	.	.	.
14.417	17.9007	40.03	.Q	.V	.	.	.
14.500	18.1865	41.49	.Q	.V	.	.	.
14.583	18.4813	42.81	.Q	.V	.	.	.
14.667	18.7845	44.02	.Q	.V	.	.	.
14.750	19.0960	45.24	.Q	.V	.	.	.
14.833	19.4159	46.45	.Q	.V	.	.	.
14.917	19.7447	47.73	.Q	.V	.	.	.
15.000	20.0827	49.08	.Q	.V	.	.	.
15.083	20.4311	50.58	.Q	.V	.	.	.
15.167	20.7906	52.20	.Q	.V	.	.	.
15.250	21.1627	54.03	.Q	.V	.	.	.
15.333	21.5484	56.01	.Q	.V	.	.	.
15.417	21.9485	58.09	.Q	.V	.	.	.
15.500	22.3609	59.88	.Q	.V	.	.	.
15.583	22.7819	61.13	.Q	.V	.	.	.
15.667	23.2108	62.28	.Q	.V	.	.	.
15.750	23.6491	63.65	.Q	.V	.	.	.
15.833	24.1058	66.31	.Q	.V	.	.	.
15.917	24.6002	71.78	.Q	.V	.	.	.
16.000	25.1590	81.13	.Q	.V	.	.	.
16.083	25.8658	102.63	.	.Q	.V	.	.
16.167	26.8251	139.28	.	.	.Q	.V	.
16.250	28.1281	189.20	.	.	.	.V	.Q
16.333	29.6195	216.56	.	.	.	.V	.Q
16.417	31.2270	233.40	.	.	.	.V	.Q
16.500	32.6620	208.36	.	.	.	.Q	.V
16.583	33.7711	161.05	.	.	.Q	.V	.
16.667	34.6193	123.15	.	.	.Q	.V	.
16.750	35.2992	98.72	.	.Q	.	.V	.
16.833	35.8570	81.00	.	.Q	.	.V	.
16.917	36.3271	68.26	.	.Q	.	.V	.
17.000	36.7427	60.34	.	.Q	.	.V	.
17.083	37.1319	56.51	.	.Q	.	.V	.
17.167	37.4970	53.01	.	.Q	.	.V	.
17.250	37.8364	49.28	.	.Q	.	.V	.
17.333	38.1393	43.98	.	.Q	.	.V	.
17.417	38.4225	41.13	.	.Q	.	.V	.
17.500	38.6893	38.74	.	.Q	.	.V	.
17.583	38.9428	36.81	.Q	.	.	.V	.
17.667	39.1851	35.18	.Q	.	.	.V	.
17.750	39.4178	33.79	.Q	.	.	.V	.
17.833	39.6422	32.59	.Q	.	.	.V	.
17.917	39.8594	31.53	.Q	.	.	.V	.
18.000	40.0701	30.59	.Q	.	.	.V	.
18.083	40.2743	29.65	.Q	.	.	.V	.
18.167	40.4709	28.56	.Q	.	.	.V	.
18.250	40.6578	27.14	.Q	.	.	.V	.
18.333	40.8340	25.57	.Q	.	.	.V	.
18.417	40.9981	23.83	.Q	.	.	.V	.

18.500	41.1515	22.27	.Q	.	.	.	V	.
18.583	41.2968	21.10	.Q	.	.	.	V	.
18.667	41.4361	20.23	.Q	.	.	.	V	.
18.750	41.5707	19.53	.Q	.	.	.	V	.
18.833	41.7014	18.98	.Q	.	.	.	V	.
18.917	41.8288	18.51	.Q	.	.	.	V	.
19.000	41.9535	18.10	.Q	.	.	.	V	.
19.083	42.0755	17.72	.Q	.	.	.	V	.
19.167	42.1950	17.35	.Q	.	.	.	V	.
19.250	42.3121	17.00	.Q	.	.	.	V	.
19.333	42.4270	16.69	.Q	.	.	.	V	.
19.417	42.5399	16.39	.Q	.	.	.	V	.
19.500	42.6508	16.11	.Q	.	.	.	V	.
19.583	42.7598	15.83	.Q	.	.	.	V	.
19.667	42.8671	15.58	.Q	.	.	.	V	.
19.750	42.9727	15.33	.Q	.	.	.	V	.
19.833	43.0766	15.09	.Q	.	.	.	V	.
19.917	43.1789	14.86	.Q	.	.	.	V	.
20.000	43.2797	14.64	.Q	.	.	.	V	.
20.083	43.3791	14.43	.Q	.	.	.	V	.
20.167	43.4771	14.22	.Q	.	.	.	V	.
20.250	43.5737	14.03	.Q	.	.	.	V	.
20.333	43.6690	13.84	.Q	.	.	.	V	.
20.417	43.7630	13.65	.Q	.	.	.	V	.
20.500	43.8558	13.48	.Q	.	.	.	V	.
20.583	43.9474	13.31	.Q	.	.	.	V	.
20.667	44.0379	13.14	.Q	.	.	.	V	.
20.750	44.1273	12.98	.Q	.	.	.	V	.
20.833	44.2156	12.82	.Q	.	.	.	V	.
20.917	44.3029	12.67	.Q	.	.	.	V	.
21.000	44.3892	12.53	.Q	.	.	.	V	.
21.083	44.4745	12.38	.Q	.	.	.	V	.
21.167	44.5588	12.25	.Q	.	.	.	V	.
21.250	44.6423	12.11	.Q	.	.	.	V	.
21.333	44.7248	11.98	.Q	.	.	.	V	.
21.417	44.8064	11.86	.Q	.	.	.	V	.
21.500	44.8873	11.73	.Q	.	.	.	V	.
21.583	44.9672	11.61	.Q	.	.	.	V	.
21.667	45.0464	11.50	.Q	.	.	.	V	.
21.750	45.1248	11.38	.Q	.	.	.	V	.
21.833	45.2025	11.27	.Q	.	.	.	V	.
21.917	45.2794	11.16	.Q	.	.	.	V	.
22.000	45.3555	11.06	.Q	.	.	.	V	.
22.083	45.4310	10.96	.Q	.	.	.	V	.
22.167	45.5057	10.86	.Q	.	.	.	V	.
22.250	45.5798	10.76	.Q	.	.	.	V	.
22.333	45.6533	10.66	.Q	.	.	.	V	.
22.417	45.7261	10.57	.Q	.	.	.	V	.
22.500	45.7982	10.48	.Q	.	.	.	V	.
22.583	45.8698	10.39	.Q	.	.	.	V	.
22.667	45.9407	10.30	.Q	.	.	.	V	.
22.750	46.0110	10.21	.Q	.	.	.	V	.
22.833	46.0808	10.13	.Q	.	.	.	V	.
22.917	46.1500	10.05	.Q	.	.	.	V	.
23.000	46.2187	9.97	.Q	.	.	.	V	.
23.083	46.2868	9.89	.Q	.	.	.	V	.
23.167	46.3544	9.81	.Q	.	.	.	V	.
23.250	46.4214	9.74	.Q	.	.	.	V	.

23.333	46.4880	9.66	.Q	.	.	.	V	.
23.417	46.5540	9.59	.Q	.	.	.	V	.
23.500	46.6196	9.52	.Q	.	.	.	V	.
23.583	46.6847	9.45	.Q	.	.	.	V	.
23.667	46.7493	9.38	.Q	.	.	.	V	.
23.750	46.8134	9.31	.Q	.	.	.	V	.
23.833	46.8771	9.25	.Q	.	.	.	V	.
23.917	46.9403	9.18	.Q	.	.	.	V	.
24.000	47.0032	9.12	.Q	.	.	.	V	.
24.083	47.0647	8.93	.Q	.	.	.	V	.
24.167	47.1227	8.42	.Q	.	.	.	V	.
24.250	47.1729	7.29	Q	.	.	.	V	.
24.333	47.2131	5.84	Q	.	.	.	V	.
24.417	47.2409	4.04	Q	.	.	.	V	.
24.500	47.2579	2.46	Q	.	.	.	V	.
24.583	47.2677	1.44	Q	.	.	.	V	.
24.667	47.2734	0.83	Q	.	.	.	V	.
24.750	47.2766	0.45	Q	.	.	.	V	.
24.833	47.2783	0.25	Q	.	.	.	V	.
24.917	47.2794	0.16	Q	.	.	.	V	.
25.000	47.2801	0.12	Q	.	.	.	V	.
25.083	47.2807	0.08	Q	.	.	.	V	.
25.167	47.2809	0.04	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1510.0
10%	365.0
20%	145.0
30%	60.0
40%	45.0
50%	35.0
60%	25.0
70%	20.0
80%	20.0
90%	10.0

FLOW PROCESS FROM NODE 330.00 TO NODE 330.00 IS CODE = 7

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

FLOW PROCESS FROM NODE 330.00 TO NODE 330.00 IS CODE = 7

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<
=====

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

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	775.0	1550.0	2325.0	3100.0
0.083	0.0136	1.98	Q	.	.	.	.
0.167	0.0955	11.89	Q	.	.	.	.
0.250	0.3113	31.34	Q	.	.	.	.
0.333	0.6975	56.07	Q	.	.	.	.
0.417	1.2236	76.40	Q	.	.	.	.
0.500	1.8313	88.24	VQ	.	.	.	.
0.583	2.4821	94.49	VQ	.	.	.	.
0.667	3.1549	97.68	VQ	.	.	.	.
0.750	3.8388	99.31	VQ	.	.	.	.
0.833	4.5298	100.33	VQ	.	.	.	.
0.917	5.2263	101.13	VQ	.	.	.	.
1.000	5.9269	101.74	VQ	.	.	.	.
1.083	6.6310	102.22	VQ	.	.	.	.
1.167	7.3379	102.65	VQ	.	.	.	.
1.250	8.0475	103.04	VQ	.	.	.	.
1.333	8.7596	103.39	VQ	.	.	.	.
1.417	9.4741	103.75	VQ	.	.	.	.
1.500	10.1912	104.12	VQ	.	.	.	.
1.583	10.9108	104.49	VQ	.	.	.	.
1.667	11.6330	104.86	VQ	.	.	.	.
1.750	12.3577	105.23	VQ	.	.	.	.
1.833	13.0851	105.61	VQ	.	.	.	.
1.917	13.8150	105.99	.Q	.	.	.	.
2.000	14.5477	106.38	.Q	.	.	.	.
2.083	15.2830	106.77	.Q	.	.	.	.
2.167	16.0210	107.16	.Q	.	.	.	.
2.250	16.7618	107.56	.Q	.	.	.	.
2.333	17.5053	107.96	.Q	.	.	.	.
2.417	18.2515	108.36	.Q	.	.	.	.
2.500	19.0006	108.77	.Q	.	.	.	.
2.583	19.7525	109.18	.Q	.	.	.	.
2.667	20.5073	109.59	.Q	.	.	.	.
2.750	21.2650	110.01	.Q	.	.	.	.
2.833	22.0256	110.44	.Q	.	.	.	.
2.917	22.7891	110.87	.Q	.	.	.	.
3.000	23.5556	111.30	.Q	.	.	.	.
3.083	24.3251	111.74	.Q	.	.	.	.
3.167	25.0977	112.18	.Q	.	.	.	.
3.250	25.8734	112.62	.Q	.	.	.	.
3.333	26.6521	113.08	.Q	.	.	.	.
3.417	27.4340	113.53	.QV	.	.	.	.
3.500	28.2191	113.99	.QV	.	.	.	.
3.583	29.0074	114.46	.QV	.	.	.	.
3.667	29.7989	114.93	.QV	.	.	.	.
3.750	30.5937	115.40	.QV	.	.	.	.
3.833	31.3918	115.89	.QV	.	.	.	.
3.917	32.1933	116.37	.QV	.	.	.	.
4.000	32.9981	116.86	.QV	.	.	.	.

4.083	33.8063	117.36	.QV	.	.	.	.
4.167	34.6180	117.86	.QV	.	.	.	.
4.250	35.4332	118.37	.QV	.	.	.	.
4.333	36.2520	118.88	.QV	.	.	.	.
4.417	37.0743	119.40	.QV	.	.	.	.
4.500	37.9002	119.92	.QV	.	.	.	.
4.583	38.7298	120.46	.QV	.	.	.	.
4.667	39.5631	120.99	.QV	.	.	.	.
4.750	40.4001	121.54	.Q V	.	.	.	.
4.833	41.2409	122.09	.Q V	.	.	.	.
4.917	42.0856	122.64	.Q V	.	.	.	.
5.000	42.9341	123.21	.Q V	.	.	.	.
5.083	43.7866	123.78	.Q V	.	.	.	.
5.167	44.6430	124.35	.Q V	.	.	.	.
5.250	45.5034	124.94	.Q V	.	.	.	.
5.333	46.3680	125.53	.Q V	.	.	.	.
5.417	47.2366	126.13	.Q V	.	.	.	.
5.500	48.1094	126.73	.Q V	.	.	.	.
5.583	48.9865	127.34	.Q V	.	.	.	.
5.667	49.8678	127.97	.Q V	.	.	.	.
5.750	50.7534	128.59	.Q V	.	.	.	.
5.833	51.6434	129.23	.Q V	.	.	.	.
5.917	52.5379	129.88	.Q V	.	.	.	.
6.000	53.4368	130.53	.Q V	.	.	.	.
6.083	54.3404	131.19	.Q V	.	.	.	.
6.167	55.2485	131.86	.Q V	.	.	.	.
6.250	56.1613	132.54	.Q V	.	.	.	.
6.333	57.0789	133.23	.Q V	.	.	.	.
6.417	58.0013	133.93	.Q V	.	.	.	.
6.500	58.9286	134.64	.Q V	.	.	.	.
6.583	59.8608	135.36	.Q V	.	.	.	.
6.667	60.7981	136.09	.Q V	.	.	.	.
6.750	61.7404	136.83	.Q V	.	.	.	.
6.833	62.6879	137.58	.Q V	.	.	.	.
6.917	63.6406	138.34	.Q V	.	.	.	.
7.000	64.5987	139.11	.Q V	.	.	.	.
7.083	65.5621	139.89	.Q V	.	.	.	.
7.167	66.5310	140.68	.Q V	.	.	.	.
7.250	67.5054	141.48	.Q V	.	.	.	.
7.333	68.4854	142.30	.Q V	.	.	.	.
7.417	69.4712	143.13	.Q V	.	.	.	.
7.500	70.4627	143.98	.Q V	.	.	.	.
7.583	71.4602	144.83	.Q V	.	.	.	.
7.667	72.4636	145.70	.Q V	.	.	.	.
7.750	73.4731	146.58	.Q V	.	.	.	.
7.833	74.4888	147.48	.Q V	.	.	.	.
7.917	75.5108	148.39	.Q V	.	.	.	.
8.000	76.5392	149.32	.Q V	.	.	.	.
8.083	77.5740	150.25	.Q V	.	.	.	.
8.167	78.6154	151.21	.Q V	.	.	.	.
8.250	79.6635	152.18	.Q V	.	.	.	.
8.333	80.7184	153.17	.Q V	.	.	.	.
8.417	81.7802	154.18	.Q V	.	.	.	.
8.500	82.8491	155.20	. Q V	.	.	.	.
8.583	83.9251	156.24	. Q V	.	.	.	.
8.667	85.0085	157.30	. Q V	.	.	.	.
8.750	86.0992	158.38	. Q V	.	.	.	.
8.833	87.1975	159.48	. Q V	.	.	.	.

8.917	88.3035	160.59	. Q	V	.	.	.	.
9.000	89.4174	161.73	. Q	V	.	.	.	.
9.083	90.5392	162.89	. Q	V	.	.	.	.
9.167	91.6691	164.07	. Q	V	.	.	.	.
9.250	92.8074	165.27	. Q	V	.	.	.	.
9.333	93.9541	166.50	. Q	V	.	.	.	.
9.417	95.1094	167.75	. Q	V	.	.	.	.
9.500	96.2735	169.03	. Q	V	.	.	.	.
9.583	97.4465	170.32	. Q	V	.	.	.	.
9.667	98.6287	171.65	. Q	V	.	.	.	.
9.750	99.8202	173.00	. Q	V	.	.	.	.
9.833	101.0212	174.39	. Q	V	.	.	.	.
9.917	102.2319	175.80	. Q	V	.	.	.	.
10.000	103.4526	177.24	. Q	V	.	.	.	.
10.083	104.6834	178.71	. Q	V	.	.	.	.
10.167	105.9246	180.22	. Q	V	.	.	.	.
10.250	107.1763	181.75	. Q	V	.	.	.	.
10.333	108.4389	183.33	. Q	V	.	.	.	.
10.417	109.7126	184.93	. Q	V	.	.	.	.
10.500	110.9976	186.58	. Q	V	.	.	.	.
10.583	112.2942	188.26	. Q	V	.	.	.	.
10.667	113.6027	189.99	. Q	V	.	.	.	.
10.750	114.9233	191.75	. Q	V	.	.	.	.
10.833	116.2564	193.57	. Q	V	.	.	.	.
10.917	117.6023	195.42	. Q	V	.	.	.	.
11.000	118.9612	197.32	. Q	V	.	.	.	.
11.083	120.3336	199.27	. Q	V	.	.	.	.
11.167	121.7198	201.27	. Q	V	.	.	.	.
11.250	123.1201	203.32	. Q	V	.	.	.	.
11.333	124.5349	205.44	. Q	V	.	.	.	.
11.417	125.9646	207.60	. Q	V	.	.	.	.
11.500	127.4098	209.83	. Q	V	.	.	.	.
11.583	128.8706	212.12	. Q	V	.	.	.	.
11.667	130.3477	214.48	. Q	V	.	.	.	.
11.750	131.8415	216.90	. Q	V	.	.	.	.
11.833	133.3525	219.40	. Q	V	.	.	.	.
11.917	134.8812	221.97	. Q	V	.	.	.	.
12.000	136.4283	224.63	. Q	V	.	.	.	.
12.083	138.0028	228.63	. Q	V	.	.	.	.
12.167	139.6405	237.79	. Q	V	.	.	.	.
12.250	141.3839	253.14	. Q	V	.	.	.	.
12.333	143.2570	271.97	. Q	V	.	.	.	.
12.417	145.2410	288.07	. Q	V	.	.	.	.
12.500	147.2993	298.87	. Q	V	.	.	.	.
12.583	149.4081	306.20	. Q	.V	.	.	.	.
12.667	151.5549	311.71	. Q	.V	.	.	.	.
12.750	153.7335	316.33	. Q	.V	.	.	.	.
12.833	155.9422	320.71	. Q	.V	.	.	.	.
12.917	158.1810	325.07	. Q	.V	.	.	.	.
13.000	160.4502	329.49	. Q	.V	.	.	.	.
13.083	162.7503	333.97	. Q	. V	.	.	.	.
13.167	165.0822	338.60	. Q	. V	.	.	.	.
13.250	167.4471	343.38	. Q	. V	.	.	.	.
13.333	169.8463	348.36	. Q	. V	.	.	.	.
13.417	172.2810	353.52	. Q	. V	.	.	.	.
13.500	174.7531	358.95	. Q	. V	.	.	.	.
13.583	177.2641	364.59	. Q	. V	.	.	.	.
13.667	179.8159	370.53	. Q	. V	.	.	.	.

13.750	182.4105	376.73	. Q	. V	.	.	.	.
13.833	185.0502	383.28	. Q	. V	.	.	.	.
13.917	187.7370	390.13	. Q	. V	.	.	.	.
14.000	190.4738	397.39	. Q	. V	.	.	.	.
14.083	193.2685	405.78	. Q	. V	.	.	.	.
14.167	196.1455	417.74	. Q	. V	.	.	.	.
14.250	199.1335	433.86	. Q	. V	.	.	.	.
14.333	202.2504	452.58	. Q	. V	.	.	.	.
14.417	205.4880	470.11	. Q	. V	.	.	.	.
14.500	208.8283	485.01	. Q	. V	.	.	.	.
14.583	212.2609	498.41	. Q	. V	.	.	.	.
14.667	215.7834	511.47	. Q	. V	.	.	.	.
14.750	219.3977	524.79	. Q	. V	.	.	.	.
14.833	223.1098	538.99	. Q	. V	.	.	.	.
14.917	226.9268	554.23	. Q	. V	.	.	.	.
15.000	230.8584	570.87	. Q	. V	.	.	.	.
15.083	234.9148	588.99	. Q	. V	.	.	.	.
15.167	239.1097	609.10	. Q	. V	.	.	.	.
15.250	243.4579	631.37	. Q	. V	.	.	.	.
15.333	247.9794	656.51	. Q	. V	.	.	.	.
15.417	252.6741	681.67	. Q	. V	.	.	.	.
15.500	257.4834	698.31	. Q	. V	.	.	.	.
15.583	262.3364	704.64	. Q	. V	.	.	.	.
15.667	267.2269	710.11	. Q	. V	.	.	.	.
15.750	272.2806	733.79	. Q	. V	.	.	.	.
15.833	277.7249	790.52	. Q	. V	.	.	.	.
15.917	283.8435	888.42	. Q	.V	.	.	.	.
16.000	291.1219	1056.82	. Q	.V	.	.	.	.
16.083	300.9105	1421.30	. Q	. V	.	.	.	.
16.167	315.6164	2135.29	. Q	. V	. Q	.	.	.
16.250	335.0671	2824.24	. Q	. V	. Q	.	.	.
16.333	356.1258	3057.72	. Q	. V	. Q	.	.	.
16.417	373.9126	2582.64	. Q	. V	. Q	.	.	.
16.500	386.6356	1847.39	. Q	. V	. Q	.	.	.
16.583	395.7851	1328.50	. Q	. V	. Q	.	.	.
16.667	402.8112	1020.19	. Q	. V	. Q	.	.	.
16.750	408.6179	843.14	. Q	. V	. Q	.	.	.
16.833	413.7183	740.57	. Q	. V	. Q	.	.	.
16.917	418.3561	673.42	. Q	. V	. Q	.	.	.
17.000	422.6043	616.84	. Q	. V	. Q	.	.	.
17.083	426.5356	570.82	. Q	. V	. Q	.	.	.
17.167	430.1957	531.45	. Q	. V	. Q	.	.	.
17.250	433.6060	495.18	. Q	. V	. Q	.	.	.
17.333	436.7795	460.79	. Q	. V	. Q	.	.	.
17.417	439.7638	433.32	. Q	. V	. Q	.	.	.
17.500	442.5985	411.60	. Q	. V	. Q	.	.	.
17.583	445.3120	394.00	. Q	. V	. Q	.	.	.
17.667	447.9232	379.14	. Q	. V	. Q	.	.	.
17.750	450.4455	366.24	. Q	. V	. Q	.	.	.
17.833	452.8885	354.71	. Q	. V	. Q	.	.	.
17.917	455.2592	344.24	. Q	. V	. Q	.	.	.
18.000	457.5641	334.67	. Q	. V	. Q	.	.	.
18.083	459.7998	324.62	. Q	. V	. Q	.	.	.
18.167	461.9361	310.19	. Q	. V	. Q	.	.	.
18.250	463.9354	290.30	. Q	. V	. Q	.	.	.
18.333	465.7789	267.68	. Q	. V	. Q	.	.	.
18.417	467.4900	248.46	. Q	. V	. Q	.	.	.
18.500	469.1097	235.18	. Q	. V	. Q	.	.	.

18.583	470.6655	225.90	.Q	.	.	.	V	.
18.667	472.1734	218.94	.Q	.	.	.	V	.
18.750	473.6424	213.29	.Q	.	.	.	V	.
18.833	475.0771	208.32	.Q	.	.	.	V	.
18.917	476.4801	203.73	.Q	.	.	.	V	.
19.000	477.8540	199.49	.Q	.	.	.	V	.
19.083	479.2007	195.53	.Q	.	.	.	V	.
19.167	480.5217	191.81	.Q	.	.	.	V	.
19.250	481.8185	188.29	.Q	.	.	.	V	.
19.333	483.0923	184.95	.Q	.	.	.	V	.
19.417	484.3441	181.77	.Q	.	.	.	V	.
19.500	485.5750	178.72	.Q	.	.	.	V	.
19.583	486.7857	175.80	.Q	.	.	.	V	.
19.667	487.9772	173.00	.Q	.	.	.	V	.
19.750	489.1502	170.32	.Q	.	.	.	V	.
19.833	490.3055	167.74	.Q	.	.	.	V	.
19.917	491.4436	165.26	.Q	.	.	.	V	.
20.000	492.5654	162.87	.Q	.	.	.	V	.
20.083	493.6713	160.58	.Q	.	.	.	V	.
20.167	494.7619	158.36	.Q	.	.	.	V	.
20.250	495.8378	156.22	.Q	.	.	.	V	.
20.333	496.8995	154.16	.Q	.	.	.	V	.
20.417	497.9474	152.16	.Q	.	.	.	V	.
20.500	498.9821	150.23	.Q	.	.	.	V	.
20.583	500.0038	148.36	.Q	.	.	.	V	.
20.667	501.0132	146.55	.Q	.	.	.	V	.
20.750	502.0104	144.80	.Q	.	.	.	V	.
20.833	502.9960	143.10	.Q	.	.	.	V	.
20.917	503.9702	141.46	.Q	.	.	.	V	.
21.000	504.9334	139.86	.Q	.	.	.	V	.
21.083	505.8859	138.30	.Q	.	.	.	V	.
21.167	506.8280	136.79	.Q	.	.	.	V	.
21.250	507.7600	135.33	.Q	.	.	.	V	.
21.333	508.6822	133.90	.Q	.	.	.	V	.
21.417	509.5948	132.51	.Q	.	.	.	V	.
21.500	510.4981	131.16	.Q	.	.	.	V	.
21.583	511.3924	129.85	.Q	.	.	.	V	.
21.667	512.2778	128.56	.Q	.	.	.	V	.
21.750	513.1547	127.31	.Q	.	.	.	V	.
21.833	514.0231	126.09	.Q	.	.	.	V	.
21.917	514.8833	124.90	.Q	.	.	.	V	.
22.000	515.7355	123.74	.Q	.	.	.	V	.
22.083	516.5800	122.61	.Q	.	.	.	V	.
22.167	517.4167	121.51	.Q	.	.	.	V	.
22.250	518.2462	120.43	.Q	.	.	.	V	.
22.333	519.0682	119.37	.Q	.	.	.	V	.
22.417	519.8832	118.34	.Q	.	.	.	V	.
22.500	520.6913	117.33	.Q	.	.	.	V	.
22.583	521.4925	116.34	.Q	.	.	.	V	.
22.667	522.2870	115.37	.Q	.	.	.	V	.
22.750	523.0751	114.43	.Q	.	.	.	V	.
22.833	523.8568	113.50	.Q	.	.	.	V	.
22.917	524.6323	112.60	.Q	.	.	.	V	.
23.000	525.4016	111.71	.Q	.	.	.	V	.
23.083	526.1650	110.84	.Q	.	.	.	V	.
23.167	526.9225	109.99	.Q	.	.	.	V	.
23.250	527.6742	109.15	.Q	.	.	.	V	.
23.333	528.4203	108.33	.Q	.	.	.	V	.

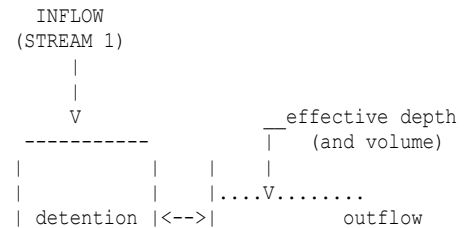
23.417	529.1608	107.53	.Q	.	.	.	V	.
23.500	529.8959	106.74	.Q	.	.	.	V	.
23.583	530.6257	105.97	.Q	.	.	.	V	.
23.667	531.3503	105.21	.Q	.	.	.	V	.
23.750	532.0698	104.46	.Q	.	.	.	V	.
23.833	532.7842	103.73	.Q	.	.	.	V	.
23.917	533.4937	103.02	.Q	.	.	.	V	.
24.000	534.1983	102.31	.Q	.	.	.	V	.
24.083	534.8845	99.64	.Q	.	.	.	V	.
24.167	535.4981	89.09	.Q	.	.	.	V	.
24.250	535.9741	69.11	Q	.	.	.	V	.
24.333	536.2776	44.07	Q	.	.	.	V	.
24.417	536.4407	23.67	Q	.	.	.	V	.
24.500	536.5229	11.94	Q	.	.	.	V	.
24.583	536.5636	5.91	Q	.	.	.	V	.
24.667	536.5842	3.00	Q	.	.	.	V	.
24.750	536.5958	1.68	Q	.	.	.	V	.
24.833	536.6025	0.98	Q	.	.	.	V	.
24.917	536.6061	0.52	Q	.	.	.	V	.
25.000	536.6078	0.25	Q	.	.	.	V	.
25.083	536.6085	0.11	Q	.	.	.	V	.
25.167	536.6088	0.04	Q	.	.	.	V	.
25.250	536.6088	0.00	Q	.	.	.	V	.

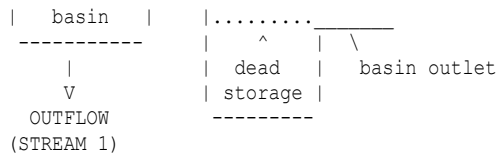
 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1510.0
10%	340.0
20%	110.0
30%	45.0
40%	35.0
50%	25.0
60%	25.0
70%	15.0
80%	15.0
90%	10.0

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

 >>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<





ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

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

=====

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH (FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME (AF)
0.083	0.000	1.98	0.00	0.01	0.0	0.014
0.167	0.000	11.89	0.00	0.05	0.0	0.095
0.250	0.000	31.34	0.00	0.16	0.0	0.311
0.333	0.000	56.07	0.00	0.35	0.0	0.697
0.417	0.000	76.40	0.00	0.61	0.0	1.224

0.500	0.000	88.24	0.00	0.92	0.0	1.831
0.583	0.000	94.49	0.00	1.12	0.0	2.482
0.667	0.000	97.68	0.00	1.29	0.0	3.155
0.750	0.000	99.31	0.00	1.46	0.0	3.838
0.833	0.000	100.33	0.00	1.63	0.0	4.529
0.917	0.000	101.13	0.00	1.81	0.0	5.226
1.000	0.000	101.74	0.00	1.98	0.0	5.926
1.083	0.000	102.22	0.00	2.09	0.0	6.630
1.167	0.000	102.65	0.00	2.19	0.0	7.337
1.250	0.000	103.04	0.00	2.29	0.0	8.046
1.333	0.000	103.39	0.00	2.39	0.0	8.758
1.417	0.000	103.75	0.00	2.50	0.0	9.472
1.500	0.000	104.12	0.00	2.60	0.0	10.189
1.583	0.000	104.49	0.00	2.70	0.0	10.909
1.667	0.000	104.86	0.00	2.80	0.0	11.631
1.750	0.000	105.23	0.00	2.91	0.0	12.355
1.833	0.000	105.61	0.00	3.01	0.0	13.082
1.917	0.000	105.99	0.00	3.10	0.0	13.812
2.000	0.000	106.38	0.00	3.19	0.0	14.545
2.083	0.000	106.77	0.00	3.28	0.0	15.280
2.167	0.000	107.16	0.00	3.38	0.0	16.017
2.250	0.000	107.56	0.00	3.47	0.0	16.758
2.333	0.000	107.96	0.00	3.56	0.0	17.501
2.417	0.000	108.36	0.00	3.66	0.0	18.247
2.500	0.000	108.77	0.00	3.75	0.0	18.996
2.583	0.000	109.18	0.00	3.84	0.0	19.748
2.667	0.000	109.59	0.00	3.94	0.0	20.502
2.750	0.000	110.01	0.00	4.03	0.0	21.259
2.833	0.000	110.44	0.00	4.11	0.0	22.020
2.917	0.000	110.87	0.00	4.20	0.0	22.783
3.000	0.000	111.30	0.00	4.28	0.0	23.549
3.083	0.000	111.74	0.00	4.37	0.0	24.318
3.167	0.000	112.18	0.00	4.45	0.0	25.091
3.250	0.000	112.62	0.00	4.54	0.0	25.866
3.333	0.000	113.08	0.00	4.63	0.1	26.644
3.417	0.000	113.53	0.00	4.71	0.1	27.426
3.500	0.000	113.99	0.00	4.80	0.1	28.211
3.583	0.000	114.46	0.00	4.89	0.1	28.998
3.667	0.000	114.93	0.00	4.98	0.1	29.790
3.750	0.000	115.40	0.00	5.05	0.1	30.584
3.833	0.000	115.89	0.00	5.13	0.1	31.382
3.917	0.000	116.37	0.00	5.20	0.1	32.183
4.000	0.000	116.86	0.00	5.27	0.1	32.987
4.083	0.000	117.36	0.00	5.35	0.1	33.795
4.167	0.000	117.86	0.00	5.42	0.1	34.606
4.250	0.000	118.37	0.00	5.49	0.1	35.421
4.333	0.000	118.88	0.00	5.57	0.1	36.239
4.417	0.000	119.40	0.00	5.64	0.1	37.061
4.500	0.000	119.92	0.00	5.72	0.1	37.887
4.583	0.000	120.46	0.00	5.79	0.1	38.716
4.667	0.000	120.99	0.00	5.87	0.1	39.549
4.750	0.000	121.54	0.00	5.94	0.1	40.385
4.833	0.000	122.09	0.00	6.02	0.6	41.222
4.917	0.000	122.64	0.00	6.09	3.3	42.044
5.000	0.000	123.21	0.00	6.15	7.5	42.840
5.083	0.000	123.78	0.00	6.22	11.6	43.613
5.167	0.000	124.35	0.00	6.28	15.5	44.363
5.250	0.000	124.94	0.00	6.34	19.3	45.090

5.333	0.000	125.53	0.00	6.40	23.0	45.797
5.417	0.000	126.13	0.00	6.46	26.6	46.482
5.500	0.000	126.73	0.00	6.51	30.1	47.148
5.583	0.000	127.34	0.00	6.57	33.5	47.794
5.667	0.000	127.97	0.00	6.62	36.8	48.423
5.750	0.000	128.59	0.00	6.67	40.0	49.033
5.833	0.000	129.23	0.00	6.72	43.1	49.626
5.917	0.000	129.88	0.00	6.77	46.1	50.204
6.000	0.000	130.53	0.00	6.81	49.0	50.765
6.083	0.000	131.19	0.00	6.86	51.9	51.311
6.167	0.000	131.86	0.00	6.90	54.7	51.843
6.250	0.000	132.54	0.00	6.95	57.4	52.361
6.333	0.000	133.23	0.00	6.99	60.0	52.865
6.417	0.000	133.93	0.00	7.03	64.5	53.343
6.500	0.000	134.64	0.00	7.06	71.4	53.779
6.583	0.000	135.36	0.00	7.09	78.3	54.172
6.667	0.000	136.09	0.00	7.12	84.5	54.527
6.750	0.000	136.83	0.00	7.14	90.2	54.848
6.833	0.000	137.58	0.00	7.16	95.3	55.140
6.917	0.000	138.34	0.00	7.18	99.9	55.404
7.000	0.000	139.11	0.00	7.20	104.1	55.645
7.083	0.000	139.89	0.00	7.22	108.0	55.865
7.167	0.000	140.68	0.00	7.24	111.5	56.066
7.250	0.000	141.48	0.00	7.25	114.7	56.250
7.333	0.000	142.30	0.00	7.26	117.7	56.420
7.417	0.000	143.13	0.00	7.28	120.4	56.576
7.500	0.000	143.98	0.00	7.29	122.9	56.721
7.583	0.000	144.83	0.00	7.30	125.2	56.856
7.667	0.000	145.70	0.00	7.31	127.4	56.982
7.750	0.000	146.58	0.00	7.32	129.5	57.100
7.833	0.000	147.48	0.00	7.32	131.4	57.211
7.917	0.000	148.39	0.00	7.33	133.2	57.316
8.000	0.000	149.32	0.00	7.34	134.9	57.415
8.083	0.000	150.25	0.00	7.35	136.5	57.510
8.167	0.000	151.21	0.00	7.35	138.0	57.601
8.250	0.000	152.18	0.00	7.36	139.5	57.688
8.333	0.000	153.17	0.00	7.37	141.0	57.772
8.417	0.000	154.18	0.00	7.37	142.3	57.854
8.500	0.000	155.20	0.00	7.38	143.7	57.933
8.583	0.000	156.24	0.00	7.39	145.0	58.011
8.667	0.000	157.30	0.00	7.39	146.3	58.086
8.750	0.000	158.38	0.00	7.40	147.5	58.161
8.833	0.000	159.48	0.00	7.40	148.8	58.235
8.917	0.000	160.59	0.00	7.41	150.0	58.308
9.000	0.000	161.73	0.00	7.41	151.2	58.380
9.083	0.000	162.89	0.00	7.42	152.4	58.453
9.167	0.000	164.07	0.00	7.42	153.6	58.525
9.250	0.000	165.27	0.00	7.43	154.8	58.597
9.333	0.000	166.50	0.00	7.44	156.0	58.669
9.417	0.000	167.75	0.00	7.44	157.2	58.741
9.500	0.000	169.03	0.00	7.45	158.4	58.814
9.583	0.000	170.32	0.00	7.45	159.7	58.887
9.667	0.000	171.65	0.00	7.46	160.9	58.962
9.750	0.000	173.00	0.00	7.46	162.1	59.036
9.833	0.000	174.39	0.00	7.47	163.4	59.112
9.917	0.000	175.80	0.00	7.48	164.7	59.189
10.000	0.000	177.24	0.00	7.48	166.0	59.267
10.083	0.000	178.71	0.00	7.49	167.3	59.345

10.167	0.000	180.22	0.00	7.49	168.6	59.426
10.250	0.000	181.75	0.00	7.50	169.9	59.507
10.333	0.000	183.33	0.00	7.51	171.3	59.590
10.417	0.000	184.93	0.00	7.51	172.7	59.674
10.500	0.000	186.58	0.00	7.52	174.1	59.760
10.583	0.000	188.26	0.00	7.53	175.6	59.847
10.667	0.000	189.99	0.00	7.53	177.0	59.936
10.750	0.000	191.75	0.00	7.54	178.5	60.027
10.833	0.000	193.57	0.00	7.55	180.1	60.120
10.917	0.000	195.42	0.00	7.56	181.6	60.215
11.000	0.000	197.32	0.00	7.56	183.2	60.312
11.083	0.000	199.27	0.00	7.57	184.9	60.411
11.167	0.000	201.27	0.00	7.58	186.6	60.513
11.250	0.000	203.32	0.00	7.59	188.3	60.616
11.333	0.000	205.44	0.00	7.59	190.0	60.722
11.417	0.000	207.60	0.00	7.60	191.8	60.831
11.500	0.000	209.83	0.00	7.61	193.6	60.943
11.583	0.000	212.12	0.00	7.62	195.5	61.057
11.667	0.000	214.48	0.00	7.63	197.5	61.174
11.750	0.000	216.90	0.00	7.64	199.4	61.294
11.833	0.000	219.40	0.00	7.65	201.5	61.418
11.917	0.000	221.97	0.00	7.66	203.6	61.544
12.000	0.000	224.63	0.00	7.67	205.7	61.675
12.083	0.000	228.63	0.00	7.68	208.0	61.817
12.167	0.000	237.79	0.00	7.69	210.7	62.003
12.250	0.000	253.14	0.00	7.71	214.5	62.269
12.333	0.000	271.97	0.00	7.74	219.7	62.629
12.417	0.000	288.07	0.00	7.77	226.3	63.055
12.500	0.000	298.87	0.00	7.81	233.6	63.504
12.583	0.000	306.20	0.00	7.84	241.1	63.953
12.667	0.000	311.71	0.00	7.88	248.5	64.388
12.750	0.000	316.33	0.00	7.91	255.6	64.807
12.833	0.000	320.71	0.00	7.94	262.4	65.208
12.917	0.000	325.07	0.00	7.97	269.0	65.594
13.000	0.000	329.49	0.00	8.00	275.3	65.967
13.083	0.000	333.97	0.00	8.02	282.9	66.318
13.167	0.000	338.60	0.00	8.05	291.7	66.642
13.250	0.000	343.38	0.00	8.07	299.9	66.941
13.333	0.000	348.36	0.00	8.09	307.6	67.221
13.417	0.000	353.52	0.00	8.11	314.8	67.488
13.500	0.000	358.95	0.00	8.13	321.8	67.744
13.583	0.000	364.59	0.00	8.15	328.4	67.993
13.667	0.000	370.53	0.00	8.17	335.0	68.238
13.750	0.000	376.73	0.00	8.19	341.4	68.481
13.833	0.000	383.28	0.00	8.21	347.9	68.725
13.917	0.000	390.13	0.00	8.23	354.4	68.971
14.000	0.000	397.39	0.00	8.25	360.9	69.222
14.083	0.000	405.78	0.00	8.27	367.7	69.484
14.167	0.000	417.74	0.00	8.29	375.1	69.778
14.250	0.000	433.86	0.00	8.32	383.6	70.124
14.333	0.000	452.58	0.00	8.35	393.5	70.531
14.417	0.000	470.11	0.00	8.38	404.8	70.981
14.500	0.000	485.01	0.00	8.42	417.0	71.449
14.583	0.000	498.41	0.00	8.46	429.5	71.924
14.667	0.000	511.47	0.00	8.49	442.1	72.402
14.750	0.000	524.79	0.00	8.53	454.8	72.884
14.833	0.000	538.99	0.00	8.57	467.7	73.375
14.917	0.000	554.23	0.00	8.61	480.8	73.881

15.000	0.000	570.87	0.00	8.65	494.5	74.407
15.083	0.000	588.99	0.00	8.69	508.8	74.959
15.167	0.000	609.10	0.00	8.73	523.8	75.546
15.250	0.000	631.37	0.00	8.78	539.9	76.176
15.333	0.000	656.51	0.00	8.84	557.3	76.859
15.417	0.000	681.67	0.00	8.89	576.0	77.587
15.500	0.000	698.31	0.00	8.95	595.0	78.298
15.583	0.000	704.64	0.00	8.99	612.8	78.931
15.667	0.000	710.11	0.00	9.04	628.0	79.497
15.750	0.000	733.79	0.00	9.09	642.2	80.128
15.833	0.000	790.52	0.00	9.16	660.2	81.025
15.917	0.000	888.42	0.00	9.26	687.2	82.411
16.000	0.000	1056.82	0.00	9.44	730.1	84.661
16.083	0.000	1421.30	0.00	9.76	806.7	88.894
16.167	0.000	2135.29	0.00	10.40	924.1	97.235
16.250	0.000	2824.24	0.00	11.31	1057.3	109.404
16.333	0.000	3057.72	0.00	12.24	1179.5	122.340
16.417	0.000	2582.64	0.00	12.88	1271.2	131.372
16.500	0.000	1847.39	0.00	13.13	1319.1	135.011
16.583	0.000	1328.50	0.00	13.13	1331.8	134.988
16.667	0.000	1020.19	0.00	12.99	1324.9	132.889
16.750	0.000	843.14	0.00	12.76	1305.7	129.703
16.833	0.000	740.57	0.00	12.50	1278.9	125.996
16.917	0.000	673.42	0.00	12.22	1249.0	122.031
17.000	0.000	616.84	0.00	11.92	1216.8	117.899
17.083	0.000	570.82	0.00	11.62	1181.0	113.697
17.167	0.000	531.45	0.00	11.32	1142.8	109.487
17.250	0.000	495.18	0.00	11.02	1104.7	105.289
17.333	0.000	460.79	0.00	10.70	1061.7	101.151
17.417	0.000	433.32	0.00	10.40	1014.2	97.151
17.500	0.000	411.60	0.00	10.10	968.1	93.318
17.583	0.000	394.00	0.00	9.83	911.3	89.756
17.667	0.000	379.14	0.00	9.58	839.6	86.585
17.750	0.000	366.24	0.00	9.37	769.3	83.809
17.833	0.000	354.71	0.00	9.18	707.8	81.377
17.917	0.000	344.24	0.00	9.02	653.9	79.244
18.000	0.000	334.67	0.00	8.88	604.5	77.385
18.083	0.000	324.62	0.00	8.75	558.9	75.772
18.167	0.000	310.19	0.00	8.64	518.6	74.337
18.250	0.000	290.30	0.00	8.54	482.1	73.015
18.333	0.000	267.68	0.00	8.44	448.2	71.772
18.417	0.000	248.46	0.00	8.36	416.4	70.615
18.500	0.000	235.18	0.00	8.27	387.3	69.568
18.583	0.000	225.90	0.00	8.20	361.1	68.637
18.667	0.000	218.94	0.00	8.14	337.9	67.817
18.750	0.000	213.29	0.00	8.08	317.6	67.099
18.833	0.000	208.32	0.00	8.04	299.8	66.469
18.917	0.000	203.73	0.00	7.99	284.5	65.913
19.000	0.000	199.49	0.00	7.95	273.3	65.405
19.083	0.000	195.53	0.00	7.92	265.1	64.926
19.167	0.000	191.81	0.00	7.88	257.3	64.475
19.250	0.000	188.29	0.00	7.85	250.0	64.050
19.333	0.000	184.95	0.00	7.82	243.1	63.649
19.417	0.000	181.77	0.00	7.79	236.6	63.272
19.500	0.000	178.72	0.00	7.76	230.5	62.915
19.583	0.000	175.80	0.00	7.74	224.7	62.578
19.667	0.000	173.00	0.00	7.71	219.2	62.260
19.750	0.000	170.32	0.00	7.69	214.1	61.959

19.833	0.000	167.74	0.00	7.67	209.2	61.674
19.917	0.000	165.26	0.00	7.65	204.5	61.403
20.000	0.000	162.87	0.00	7.63	200.1	61.147
20.083	0.000	160.58	0.00	7.61	196.0	60.903
20.167	0.000	158.36	0.00	7.59	192.0	60.671
20.250	0.000	156.22	0.00	7.57	188.2	60.451
20.333	0.000	154.16	0.00	7.56	184.6	60.241
20.417	0.000	152.16	0.00	7.54	181.2	60.041
20.500	0.000	150.23	0.00	7.53	177.9	59.850
20.583	0.000	148.36	0.00	7.51	174.8	59.668
20.667	0.000	146.55	0.00	7.50	171.9	59.494
20.750	0.000	144.80	0.00	7.49	169.0	59.327
20.833	0.000	143.10	0.00	7.47	166.3	59.168
20.917	0.000	141.46	0.00	7.46	163.7	59.015
21.000	0.000	139.86	0.00	7.45	161.2	58.868
21.083	0.000	138.30	0.00	7.44	158.8	58.727
21.167	0.000	136.79	0.00	7.43	156.5	58.591
21.250	0.000	135.33	0.00	7.42	154.2	58.461
21.333	0.000	133.90	0.00	7.41	152.1	58.336
21.417	0.000	132.51	0.00	7.40	150.1	58.215
21.500	0.000	131.16	0.00	7.39	148.1	58.098
21.583	0.000	129.85	0.00	7.38	146.2	57.986
21.667	0.000	128.56	0.00	7.38	144.3	57.877
21.750	0.000	127.31	0.00	7.37	142.5	57.773
21.833	0.000	126.09	0.00	7.36	140.8	57.671
21.917	0.000	124.90	0.00	7.35	139.2	57.573
22.000	0.000	123.74	0.00	7.34	137.5	57.478
22.083	0.000	122.61	0.00	7.34	136.0	57.386
22.167	0.000	121.51	0.00	7.33	134.5	57.297
22.250	0.000	120.43	0.00	7.32	133.0	57.210
22.333	0.000	119.37	0.00	7.32	131.6	57.126
22.417	0.000	118.34	0.00	7.31	130.2	57.044
22.500	0.000	117.33	0.00	7.31	128.8	56.965
22.583	0.000	116.34	0.00	7.30	127.5	56.888
22.667	0.000	115.37	0.00	7.29	126.3	56.813
22.750	0.000	114.43	0.00	7.29	125.0	56.740
22.833	0.000	113.50	0.00	7.28	123.8	56.669
22.917	0.000	112.60	0.00	7.28	122.7	56.599
23.000	0.000	111.71	0.00	7.27	121.5	56.532
23.083	0.000	110.84	0.00	7.27	120.4	56.466
23.167	0.000	109.99	0.00	7.26	119.3	56.402
23.250	0.000	109.15	0.00	7.26	118.3	56.339
23.333	0.000	108.33	0.00	7.25	117.2	56.278
23.417	0.000	107.53	0.00	7.25	116.2	56.218
23.500	0.000	106.74	0.00	7.24	115.2	56.159
23.583	0.000	105.97	0.00	7.24	114.3	56.102
23.667	0.000	105.21	0.00	7.23	113.3	56.046
23.750	0.000	104.46	0.00	7.23	112.4	55.992
23.833	0.000	103.73	0.00	7.23	111.5	55.938
23.917	0.000	103.02	0.00	7.22	110.6	55.886
24.000	0.000	102.31	0.00	7.22	109.7	55.835
24.083	0.000	99.64	0.00	7.21	108.8	55.772
24.167	0.000	89.09	0.00	7.20	107.2	55.647
24.250	0.000	69.11	0.00	7.19	104.2	55.406
24.333	0.000	44.07	0.00	7.16	99.0	55.027
24.417	0.000	23.67	0.00	7.12	91.9	54.557
24.500	0.000	11.94	0.00	7.08	83.9	54.062
24.583	0.000	5.91	0.00	7.04	75.7	53.581

24.667	0.000	3.00	0.00	7.01	68.0	53.134
24.750	0.000	1.68	0.00	6.98	62.4	52.716
24.833	0.000	0.98	0.00	6.94	59.5	52.313
24.917	0.000	0.52	0.00	6.91	57.4	51.921
25.000	0.000	0.25	0.00	6.88	55.4	51.541
25.083	0.000	0.11	0.00	6.85	53.5	51.173
25.167	0.000	0.04	0.00	6.82	51.7	50.817
25.250	0.000	0.00	0.00	6.79	49.8	50.474
25.333	0.000	0.00	0.00	6.76	48.1	50.143
25.417	0.000	0.00	0.00	6.74	46.4	49.823
25.500	0.000	0.00	0.00	6.71	44.8	49.514
25.583	0.000	0.00	0.00	6.68	43.2	49.216
25.667	0.000	0.00	0.00	6.66	41.7	48.929
25.750	0.000	0.00	0.00	6.64	40.3	48.652
25.833	0.000	0.00	0.00	6.62	38.9	48.384
25.917	0.000	0.00	0.00	6.59	37.5	48.126
26.000	0.000	0.00	0.00	6.57	36.2	47.876
26.083	0.000	0.00	0.00	6.55	34.9	47.636
26.167	0.000	0.00	0.00	6.53	33.7	47.404
26.250	0.000	0.00	0.00	6.51	32.5	47.179
26.333	0.000	0.00	0.00	6.50	31.4	46.963
26.417	0.000	0.00	0.00	6.48	30.3	46.755
26.500	0.000	0.00	0.00	6.46	29.2	46.553
26.583	0.000	0.00	0.00	6.45	28.2	46.359
26.667	0.000	0.00	0.00	6.43	27.2	46.171
26.750	0.000	0.00	0.00	6.42	26.3	45.990
26.833	0.000	0.00	0.00	6.40	25.4	45.815
26.917	0.000	0.00	0.00	6.39	24.5	45.647
27.000	0.000	0.00	0.00	6.37	23.6	45.484
27.083	0.000	0.00	0.00	6.36	22.8	45.327
27.167	0.000	0.00	0.00	6.35	22.0	45.175
27.250	0.000	0.00	0.00	6.34	21.2	45.029
27.333	0.000	0.00	0.00	6.32	20.5	44.888
27.417	0.000	0.00	0.00	6.31	19.8	44.752
27.500	0.000	0.00	0.00	6.30	19.1	44.620
27.583	0.000	0.00	0.00	6.29	18.4	44.493
27.667	0.000	0.00	0.00	6.28	17.8	44.371
27.750	0.000	0.00	0.00	6.27	17.2	44.253
27.833	0.000	0.00	0.00	6.26	16.6	44.139
27.917	0.000	0.00	0.00	6.25	16.0	44.029
28.000	0.000	0.00	0.00	6.24	15.4	43.922
28.083	0.000	0.00	0.00	6.23	14.9	43.820
28.167	0.000	0.00	0.00	6.23	14.4	43.721
28.250	0.000	0.00	0.00	6.22	13.9	43.625
28.333	0.000	0.00	0.00	6.21	13.4	43.533
28.417	0.000	0.00	0.00	6.20	12.9	43.444
28.500	0.000	0.00	0.00	6.20	12.5	43.359
28.583	0.000	0.00	0.00	6.19	12.0	43.276
28.667	0.000	0.00	0.00	6.18	11.6	43.196
28.750	0.000	0.00	0.00	6.18	11.2	43.119
28.833	0.000	0.00	0.00	6.17	10.8	43.044
28.917	0.000	0.00	0.00	6.16	10.4	42.972
29.000	0.000	0.00	0.00	6.16	10.1	42.903
29.083	0.000	0.00	0.00	6.15	9.7	42.836
29.167	0.000	0.00	0.00	6.15	9.4	42.772
29.250	0.000	0.00	0.00	6.14	9.0	42.709
29.333	0.000	0.00	0.00	6.14	8.7	42.649
29.417	0.000	0.00	0.00	6.13	8.4	42.591

29.500	0.000	0.00	0.00	6.13	8.1	42.535
29.583	0.000	0.00	0.00	6.12	7.8	42.481
29.667	0.000	0.00	0.00	6.12	7.6	42.429
29.750	0.000	0.00	0.00	6.11	7.3	42.378
29.833	0.000	0.00	0.00	6.11	7.1	42.330
29.917	0.000	0.00	0.00	6.11	6.8	42.283

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 536.609 AF
BASIN STORAGE = 36.771 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 499.825 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 330.00 TO NODE 330.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<<<<
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STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	350.0	700.0	1050.0	1400.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0000	0.00	Q	.	.	.	.
0.417	0.0001	0.01	Q	.	.	.	.
0.500	0.0001	0.01	Q	.	.	.	.
0.583	0.0002	0.01	Q	.	.	.	.
0.667	0.0003	0.01	Q	.	.	.	.
0.750	0.0004	0.02	Q	.	.	.	.
0.833	0.0005	0.02	Q	.	.	.	.
0.917	0.0006	0.02	Q	.	.	.	.
1.000	0.0008	0.02	Q	.	.	.	.
1.083	0.0009	0.02	Q	.	.	.	.
1.167	0.0011	0.02	Q	.	.	.	.
1.250	0.0013	0.02	Q	.	.	.	.
1.333	0.0015	0.03	Q	.	.	.	.
1.417	0.0016	0.03	Q	.	.	.	.
1.500	0.0018	0.03	Q	.	.	.	.
1.583	0.0020	0.03	Q	.	.	.	.
1.667	0.0022	0.03	Q	.	.	.	.
1.750	0.0025	0.03	Q	.	.	.	.
1.833	0.0027	0.03	Q	.	.	.	.
1.917	0.0029	0.03	Q	.	.	.	.
2.000	0.0031	0.03	Q	.	.	.	.
2.083	0.0034	0.04	Q	.	.	.	.
2.167	0.0036	0.04	Q	.	.	.	.
2.250	0.0039	0.04	Q	.	.	.	.
2.333	0.0042	0.04	Q	.	.	.	.
2.417	0.0044	0.04	Q	.	.	.	.
2.500	0.0047	0.04	Q	.	.	.	.
2.583	0.0050	0.04	Q	.	.	.	.
2.667	0.0053	0.04	Q	.	.	.	.
2.750	0.0056	0.04	Q	.	.	.	.

2.833	0.0059	0.04	Q	.	.	.	.
2.917	0.0062	0.05	Q	.	.	.	.
3.000	0.0066	0.05	Q	.	.	.	.
3.083	0.0069	0.05	Q	.	.	.	.
3.167	0.0072	0.05	Q	.	.	.	.
3.250	0.0076	0.05	Q	.	.	.	.
3.333	0.0079	0.05	Q	.	.	.	.
3.417	0.0083	0.05	Q	.	.	.	.
3.500	0.0086	0.05	Q	.	.	.	.
3.583	0.0090	0.05	Q	.	.	.	.
3.667	0.0094	0.05	Q	.	.	.	.
3.750	0.0097	0.06	Q	.	.	.	.
3.833	0.0101	0.06	Q	.	.	.	.
3.917	0.0105	0.06	Q	.	.	.	.
4.000	0.0109	0.06	Q	.	.	.	.
4.083	0.0113	0.06	Q	.	.	.	.
4.167	0.0117	0.06	Q	.	.	.	.
4.250	0.0121	0.06	Q	.	.	.	.
4.333	0.0126	0.06	Q	.	.	.	.
4.417	0.0130	0.06	Q	.	.	.	.
4.500	0.0134	0.06	Q	.	.	.	.
4.583	0.0138	0.06	Q	.	.	.	.
4.667	0.0143	0.06	Q	.	.	.	.
4.750	0.0147	0.06	Q	.	.	.	.
4.833	0.0191	0.64	Q	.	.	.	.
4.917	0.0421	3.33	Q	.	.	.	.
5.000	0.0938	7.51	Q	.	.	.	.
5.083	0.1734	11.56	Q	.	.	.	.
5.167	0.2801	15.49	Q	.	.	.	.
5.250	0.4130	19.30	Q	.	.	.	.
5.333	0.5714	23.00	Q	.	.	.	.
5.417	0.7545	26.59	Q	.	.	.	.
5.500	0.9617	30.08	Q	.	.	.	.
5.583	1.1921	33.46	Q	.	.	.	.
5.667	1.4452	36.75	VQ	.	.	.	.
5.750	1.7204	39.95	VQ	.	.	.	.
5.833	2.0169	43.06	VQ	.	.	.	.
5.917	2.3343	46.08	VQ	.	.	.	.
6.000	2.6718	49.02	VQ	.	.	.	.
6.083	3.0291	51.87	VQ	.	.	.	.
6.167	3.4055	54.66	VQ	.	.	.	.
6.250	3.8006	57.36	VQ	.	.	.	.
6.333	4.2138	60.00	VQ	.	.	.	.
6.417	4.6582	64.52	VQ	.	.	.	.
6.500	5.1497	71.37	V Q	.	.	.	.
6.583	5.6888	78.28	V Q	.	.	.	.
6.667	6.2709	84.53	V Q	.	.	.	.
6.750	6.8920	90.17	V Q	.	.	.	.
6.833	7.5482	95.29	V Q	.	.	.	.
6.917	8.2364	99.92	V Q	.	.	.	.
7.000	8.9536	104.14	V Q	.	.	.	.
7.083	9.6973	107.99	V Q	.	.	.	.
7.167	10.4652	111.50	V Q	.	.	.	.
7.250	11.2553	114.71	V Q	.	.	.	.
7.333	12.0656	117.67	V Q	.	.	.	.
7.417	12.8948	120.39	.V Q	.	.	.	.
7.500	13.7413	122.91	.V Q	.	.	.	.
7.583	14.6038	125.25	.V Q	.	.	.	.

7.667	15.4814	127.42	.V Q	.	.	.	.
7.750	16.3730	129.46	.V Q	.	.	.	.
7.833	17.2777	131.37	.V Q	.	.	.	.
7.917	18.1949	133.17	.V Q	.	.	.	.
8.000	19.1237	134.87	.V Q	.	.	.	.
8.083	20.0638	136.49	.V Q	.	.	.	.
8.167	21.0145	138.04	.V Q	.	.	.	.
8.250	21.9754	139.53	.V Q	.	.	.	.
8.333	22.9462	140.96	.V Q	.	.	.	.
8.417	23.9265	142.34	.V Q	.	.	.	.
8.500	24.9160	143.68	.V Q	.	.	.	.
8.583	25.9146	144.99	. V Q	.	.	.	.
8.667	26.9220	146.27	. V Q	.	.	.	.
8.750	27.9380	147.53	. V Q	.	.	.	.
8.833	28.9626	148.77	. V Q	.	.	.	.
8.917	29.9956	149.99	. V Q	.	.	.	.
9.000	31.0370	151.21	. V Q	.	.	.	.
9.083	32.0866	152.41	. V Q	.	.	.	.
9.167	33.1446	153.62	. V Q	.	.	.	.
9.250	34.2108	154.82	. V Q	.	.	.	.
9.333	35.2854	156.02	. V Q	.	.	.	.
9.417	36.3682	157.23	. V Q	.	.	.	.
9.500	37.4594	158.44	. V Q	.	.	.	.
9.583	38.5590	159.66	. VQ	.	.	.	.
9.667	39.6671	160.89	. VQ	.	.	.	.
9.750	40.7837	162.14	. VQ	.	.	.	.
9.833	41.9090	163.39	. VQ	.	.	.	.
9.917	43.0431	164.67	. VQ	.	.	.	.
10.000	44.1860	165.95	. VQ	.	.	.	.
10.083	45.3380	167.26	. VQ	.	.	.	.
10.167	46.4991	168.59	. VQ	.	.	.	.
10.250	47.6694	169.94	. VQ	.	.	.	.
10.333	48.8492	171.31	. VQ	.	.	.	.
10.417	50.0386	172.70	. Q	.	.	.	.
10.500	51.2378	174.12	. Q	.	.	.	.
10.583	52.4469	175.57	. VQ	.	.	.	.
10.667	53.6662	177.04	. VQ	.	.	.	.
10.750	54.8959	178.54	. VQ	.	.	.	.
10.833	56.1361	180.08	. VQ	.	.	.	.
10.917	57.3871	181.65	. VQ	.	.	.	.
11.000	58.6491	183.25	. VQ	.	.	.	.
11.083	59.9224	184.88	. VQ	.	.	.	.
11.167	61.2072	186.56	. VQ	.	.	.	.
11.250	62.5038	188.27	. Q	.	.	.	.
11.333	63.8125	190.02	. Q	.	.	.	.
11.417	65.1335	191.81	. Q	.	.	.	.
11.500	66.4672	193.65	. Q	.	.	.	.
11.583	67.8138	195.53	. Q	.	.	.	.
11.667	69.1738	197.46	. Q	.	.	.	.
11.750	70.5474	199.44	. Q	.	.	.	.
11.833	71.9350	201.48	. Q	.	.	.	.
11.917	73.3369	203.57	. Q	.	.	.	.
12.000	74.7537	205.71	. Q	.	.	.	.
12.083	76.1861	207.99	. QV	.	.	.	.
12.167	77.6374	210.73	. Q	.	.	.	.
12.250	79.1147	214.50	. Q	.	.	.	.
12.333	80.6280	219.73	. Q	.	.	.	.
12.417	82.1864	226.28	. Q	.	.	.	.

12.500	83.7951	233.59	.	Q	.	.	.	.
12.583	85.4554	241.08	.	Q	.	.	.	.
12.667	87.1666	248.46	.	VQ	.	.	.	.
12.750	88.9269	255.59	.	Q	.	.	.	.
12.833	90.7342	262.43	.	Q	.	.	.	.
12.917	92.5868	269.00	.	Q	.	.	.	.
13.000	94.4831	275.34	.	Q	.	.	.	.
13.083	96.4317	282.94	.	VQ	.	.	.	.
13.167	98.4407	291.70	.	VQ	.	.	.	.
13.250	100.5063	299.93	.	Q	.	.	.	.
13.333	102.6248	307.61	.	Q	.	.	.	.
13.417	104.7932	314.84	.	Q	.	.	.	.
13.500	107.0091	321.76	.	VQ	.	.	.	.
13.583	109.2711	328.44	.	VQ	.	.	.	.
13.667	111.5781	334.97	.	VQ	.	.	.	.
13.750	113.9296	341.43	.	Q	.	.	.	.
13.833	116.3254	347.87	.	Q	.	.	.	.
13.917	118.7659	354.36	.	VQ	.	.	.	.
14.000	121.2517	360.94	.	VQ	.	.	.	.
14.083	123.7843	367.73	.	VQ	.	.	.	.
14.167	126.3675	375.08	.	Q	.	.	.	.
14.250	129.0090	383.55	.	Q	.	.	.	.
14.333	131.7192	393.52	.	VQ	.	.	.	.
14.417	134.5074	404.85	.	VQ	.	.	.	.
14.500	137.3792	416.99	.	VQ	.	.	.	.
14.583	140.3370	429.47	.	.VQ	.	.	.	.
14.667	143.3816	442.08	.	.VQ	.	.	.	.
14.750	146.5137	454.78	.	.VQ	.	.	.	.
14.833	149.7345	467.66	.	.V Q	.	.	.	.
14.917	153.0461	480.85	.	.VQ	.	.	.	.
15.000	156.4517	494.49	.	.V Q	.	.	.	.
15.083	159.9556	508.76	.	.V Q	.	.	.	.
15.167	163.5633	523.84	.	.VQ	.	.	.	.
15.250	167.2819	539.94	.	.V Q	.	.	.	.
15.333	171.1202	557.31	.	.V Q	.	.	.	.
15.417	175.0870	575.98	.	.V Q	.	.	.	.
15.500	179.1849	595.02	.	.V Q	.	.	.	.
15.583	183.4053	612.80	.	.V Q	.	.	.	.
15.667	187.7301	627.95	.	.V Q	.	.	.	.
15.750	192.1528	642.18	.	.V Q	.	.	.	.
15.833	196.6998	660.23	.	.V Q	.	.	.	.
15.917	201.4325	687.19	.	.V Q	.	.	.	.
16.000	206.4609	730.12	.	.V Q	.	.	.	.
16.083	212.0165	806.67	.	.V	Q	.	.	.
16.167	218.3810	924.13	.	.V	Q	.	.	.
16.250	225.6626	1057.29	.	.V	Q	.	.	.
16.333	233.7857	1179.48	.	.V	Q	.	.	.
16.417	242.5403	1271.17	.	.V	Q	.	.	.
16.500	251.6250	1319.10	.	.V	Q	.	.	.
16.583	260.7971	1331.80	.	.V	Q	.	.	.
16.667	269.9220	1324.93	.	.V	Q	.	.	.
16.750	278.9147	1305.73	.	.V	Q	.	.	.
16.833	287.7225	1278.90	.	.V	Q	.	.	.
16.917	296.3247	1249.03	.	.V	Q	.	.	.
17.000	304.7049	1216.81	.	.V	Q	.	.	.
17.083	312.8382	1180.96	.	.V	Q	.	.	.
17.167	320.7087	1142.80	.	.V	Q	.	.	.
17.250	328.3166	1104.66	.	.V	Q	.	.	.

17.333	335.6284	1061.66	.	.	.	.	V	Q	.
17.417	342.6129	1014.16	.	.	.	.	VQ	.	.
17.500	349.2801	968.07	.	.	.	.	Q	.	.
17.583	355.5560	911.26	.	.	.	.	Q	V	.
17.667	361.3381	839.57	.	.	.	.	Q	V	.
17.750	366.6367	769.34	.	.	.	.	Q	V	.
17.833	371.5116	707.85	.	.	.	.	Q	V	.
17.917	376.0154	653.95	.	.	.	.	Q	V	.
18.000	380.1787	604.52	.	.	.	.	Q	V	.
18.083	384.0281	558.93	.	.	.	.	Q	V	.
18.167	387.5996	518.59	.	.	.	.	Q	V	.
18.250	390.9200	482.12	.	.	.	.	Q	V	.
18.333	394.0067	448.19	.	.	.	.	Q	V	.
18.417	396.8747	416.44	.	.	.	.	Q	V	.
18.500	399.5419	387.27	.	.	.	.	Q	V	.
18.583	402.0287	361.09	.	.	.	.	Q	V	.
18.667	404.3561	337.93	.	.	.	.	Q	V	.
18.750	406.5433	317.59	.	.	.	.	Q	V	.
18.833	408.6077	299.75	.	.	.	.	Q	V	.
18.917	410.5670	284.49	.	.	.	.	Q	V	.
19.000	412.4493	273.31	.	.	.	.	Q	V	.
19.083	414.2748	265.07	.	.	.	.	Q	V	.
19.167	416.0469	257.31	.	.	.	.	Q	V	.
19.250	417.7686	249.99	.	.	.	.	Q	V	.
19.333	419.4429	243.11	.	.	.	.	Q	V	.
19.417	421.0724	236.61	.	.	.	.	Q	V	.
19.500	422.6598	230.48	.	.	.	.	Q	V	.
19.583	424.2072	224.70	.	.	.	.	Q	V	.
19.667	425.7171	219.23	.	.	.	.	Q	V	.
19.750	427.1913	214.06	.	.	.	.	Q	V	.
19.833	428.6318	209.16	.	.	.	.	Q	V	.
19.917	430.0404	204.52	.	.	.	.	Q	V	.
20.000	431.4187	200.13	.	.	.	.	Q	V	.
20.083	432.7682	195.95	.	.	.	.	Q	V	.
20.167	434.0904	191.99	.	.	.	.	Q	V	.
20.250	435.3866	188.21	.	.	.	.	Q	V	.
20.333	436.6581	184.62	.	.	.	.	Q	V	.
20.417	437.9061	181.20	.	.	.	.	Q	V	.
20.500	439.1316	177.94	.	.	.	.	Q	V	.
20.583	440.3356	174.83	.	.	.	.	Q	V	.
20.667	441.5192	171.85	.	.	.	.	Q	V	.
20.750	442.6831	169.01	.	.	.	.	Q	V	.
20.833	443.8283	166.28	.	.	.	.	Q	V	.
20.917	444.9556	163.67	.	.	.	.	Q	V	.
21.000	446.0656	161.17	.	.	.	.	Q	V	.
21.083	447.1590	158.77	.	.	.	.	Q	V	.
21.167	448.2366	156.46	.	.	.	.	Q	V	.
21.250	449.2989	154.24	.	.	.	.	Q	V	.
21.333	450.3465	152.11	.	.	.	.	Q	V	.
21.417	451.3799	150.06	.	.	.	.	Q	V	.
21.500	452.3997	148.08	.	.	.	.	Q	V	.
21.583	453.4064	146.17	.	.	.	.	Q	V	.
21.667	454.4003	144.32	.	.	.	.	Q	V	.
21.750	455.3820	142.54	.	.	.	.	Q	V	.
21.833	456.3518	140.82	.	.	.	.	Q	V	.
21.917	457.3102	139.15	.	.	.	.	Q	V	.
22.000	458.2574	137.54	.	.	.	.	Q	V	.
22.083	459.1939	135.98	.	.	.	.	Q	V	.

22.167	460.1200	134.47	. Q	.	.	.	V	.
22.250	461.0359	133.00	. Q	.	.	.	V	.
22.333	461.9421	131.57	. Q	.	.	.	V	.
22.417	462.8387	130.19	. Q	.	.	.	V	.
22.500	463.7261	128.85	. Q	.	.	.	V	.
22.583	464.6045	127.54	. Q	.	.	.	V	.
22.667	465.4742	126.27	. Q	.	.	.	V	.
22.750	466.3353	125.03	. Q	.	.	.	V	.
22.833	467.1881	123.83	. Q	.	.	.	V	.
22.917	468.0329	122.66	. Q	.	.	.	V	.
23.000	468.8698	121.52	. Q	.	.	.	V	.
23.083	469.6990	120.40	. Q	.	.	.	V	.
23.167	470.5207	119.32	. Q	.	.	.	V	.
23.250	471.3352	118.26	. Q	.	.	.	V	.
23.333	472.1425	117.22	. Q	.	.	.	V	.
23.417	472.9428	116.21	. Q	.	.	.	V	.
23.500	473.7364	115.23	. Q	.	.	.	V	.
23.583	474.5233	114.26	. Q	.	.	.	V	.
23.667	475.3038	113.32	. Q	.	.	.	V	.
23.750	476.0779	112.40	. Q	.	.	.	V	.
23.833	476.8457	111.49	. Q	.	.	.	V	.
23.917	477.6075	110.61	. Q	.	.	.	V	.
24.000	478.3633	109.75	. Q	.	.	.	V	.
24.083	479.1126	108.79	. Q	.	.	.	V	.
24.167	479.8511	107.23	. Q	.	.	.	V	.
24.250	480.5685	104.17	. Q	.	.	.	V	.
24.333	481.2503	99.00	. Q	.	.	.	V	.
24.417	481.8833	91.92	. Q	.	.	.	V	.
24.500	482.4608	83.86	. Q	.	.	.	V	.
24.583	482.9823	75.71	. Q	.	.	.	V	.
24.667	483.4504	67.97	. Q	.	.	.	V	.
24.750	483.8800	62.38	. Q	.	.	.	V	.
24.833	484.2897	59.49	. Q	.	.	.	V	.
24.917	484.6853	57.44	. Q	.	.	.	V	.
25.000	485.0672	55.45	. Q	.	.	.	V	.
25.083	485.4358	53.52	. Q	.	.	.	V	.
25.167	485.7915	51.65	. Q	.	.	.	V	.
25.250	486.1348	49.85	. Q	.	.	.	V	.
25.333	486.4662	48.11	. Q	.	.	.	V	.
25.417	486.7859	46.43	. Q	.	.	.	V	.
25.500	487.0945	44.81	. Q	.	.	.	V	.
25.583	487.3923	43.24	. Q	.	.	.	V	.
25.667	487.6797	41.73	. Q	.	.	.	V	.
25.750	487.9571	40.27	. Q	.	.	.	V	.
25.833	488.2247	38.87	. Q	.	.	.	V	.
25.917	488.4831	37.51	. Q	.	.	.	V	.
26.000	488.7324	36.20	. Q	.	.	.	V	.
26.083	488.9730	34.94	Q	.	.	.	V	.
26.167	489.2052	33.72	Q	.	.	.	V	.
26.250	489.4293	32.54	Q	.	.	.	V	.
26.333	489.6455	31.40	Q	.	.	.	V	.
26.417	489.8542	30.30	Q	.	.	.	V	.
26.500	490.0556	29.25	Q	.	.	.	V	.
26.583	490.2500	28.22	Q	.	.	.	V	.
26.667	490.4376	27.24	Q	.	.	.	V	.
26.750	490.6187	26.29	Q	.	.	.	V	.
26.833	490.7934	25.37	Q	.	.	.	V	.
26.917	490.9620	24.48	Q	.	.	.	V	.

27.000	491.1247	23.63	Q	.	.	.	V	.
27.083	491.2817	22.80	Q	.	.	.	V	.
27.167	491.4333	22.01	Q	.	.	.	V	.
27.250	491.5796	21.24	Q	.	.	.	V	.
27.333	491.7207	20.50	Q	.	.	.	V	.
27.417	491.8570	19.78	Q	.	.	.	V	.
27.500	491.9884	19.09	Q	.	.	.	V	.
27.583	492.1153	18.42	Q	.	.	.	V	.
27.667	492.2378	17.78	Q	.	.	.	V	.
27.750	492.3559	17.16	Q	.	.	.	V	.
27.833	492.4700	16.56	Q	.	.	.	V	.
27.917	492.5800	15.98	Q	.	.	.	V	.
28.000	492.6863	15.42	Q	.	.	.	V	.
28.083	492.7888	14.88	Q	.	.	.	V	.
28.167	492.8877	14.36	Q	.	.	.	V	.
28.250	492.9832	13.86	Q	.	.	.	V	.
28.333	493.0753	13.38	Q	.	.	.	V	.
28.417	493.1643	12.91	Q	.	.	.	V	.
28.500	493.2501	12.46	Q	.	.	.	V	.
28.583	493.3329	12.03	Q	.	.	.	V	.
28.667	493.4128	11.61	Q	.	.	.	V	.
28.750	493.4900	11.20	Q	.	.	.	V	.
28.833	493.5644	10.81	Q	.	.	.	V	.
28.917	493.6363	10.43	Q	.	.	.	V	.
29.000	493.7056	10.07	Q	.	.	.	V	.
29.083	493.7725	9.72	Q	.	.	.	V	.
29.167	493.8371	9.38	Q	.	.	.	V	.
29.250	493.8994	9.05	Q	.	.	.	V	.
29.333	493.9596	8.73	Q	.	.	.	V	.
29.417	494.0176	8.43	Q	.	.	.	V	.
29.500	494.0736	8.13	Q	.	.	.	V	.
29.583	494.1277	7.85	Q	.	.	.	V	.
29.667	494.1798	7.58	Q	.	.	.	V	.
29.750	494.2302	7.31	Q	.	.	.	V	.
29.833	494.2788	7.06	Q	.	.	.	V	.
29.917	494.3257	6.81	Q	.	.	.	V	.
30.000	494.3709	6.57	Q	.	.	.	V	.
30.083	494.4146	6.34	Q	.	.	.	V	.
30.167	494.4568	6.12	Q	.	.	.	V	.
30.250	494.4974	5.91	Q	.	.	.	V	.
30.333	494.5367	5.70	Q	.	.	.	V	.
30.417	494.5746	5.50	Q	.	.	.	V	.
30.500	494.6111	5.31	Q	.	.	.	V	.
30.583	494.6464	5.12	Q	.	.	.	V	.
30.667	494.6805	4.94	Q	.	.	.	V	.
30.750	494.7133	4.77	Q	.	.	.	V	.
30.833	494.7450	4.61	Q	.	.	.	V	.
30.917	494.7756	4.44	Q	.	.	.	V	.
31.000	494.8052	4.29	Q	.	.	.	V	.
31.083	494.8337	4.14	Q	.	.	.	V	.
31.167	494.8612	3.99	Q	.	.	.	V	.
31.250	494.8878	3.86	Q	.	.	.	V	.
31.333	494.9134	3.72	Q	.	.	.	V	.
31.417	494.9381	3.59	Q	.	.	.	V	.
31.500	494.9620	3.47	Q	.	.	.	V	.
31.583	494.9850	3.34	Q	.	.	.	V	.
31.667	495.0072	3.23	Q	.	.	.	V	.
31.750	495.0287	3.11	Q	.	.	.	V	.

31.833	495.0494	3.01	Q	.	.	.	V.
31.917	495.0694	2.90	Q	.	.	.	V.
32.000	495.0887	2.80	Q	.	.	.	V.
32.083	495.1073	2.70	Q	.	.	.	V.
32.167	495.1252	2.61	Q	.	.	.	V.
32.250	495.1425	2.52	Q	.	.	.	V.
32.333	495.1593	2.43	Q	.	.	.	V.
32.417	495.1754	2.34	Q	.	.	.	V.
32.500	495.1910	2.26	Q	.	.	.	V.
32.583	495.2060	2.18	Q	.	.	.	V.
32.667	495.2205	2.11	Q	.	.	.	V.
32.750	495.2345	2.03	Q	.	.	.	V.
32.833	495.2480	1.96	Q	.	.	.	V.
32.917	495.2611	1.89	Q	.	.	.	V.
33.000	495.2737	1.83	Q	.	.	.	V.
33.083	495.2858	1.76	Q	.	.	.	V.
33.167	495.2975	1.70	Q	.	.	.	V.
33.250	495.3088	1.64	Q	.	.	.	V.
33.333	495.3198	1.59	Q	.	.	.	V.
33.417	495.3303	1.53	Q	.	.	.	V.
33.500	495.3405	1.48	Q	.	.	.	V.
33.583	495.3503	1.42	Q	.	.	.	V.
33.667	495.3597	1.37	Q	.	.	.	V.
33.750	495.3689	1.33	Q	.	.	.	V.
33.833	495.3777	1.28	Q	.	.	.	V.
33.917	495.3862	1.24	Q	.	.	.	V.
34.000	495.3944	1.19	Q	.	.	.	V.
34.083	495.4023	1.15	Q	.	.	.	V.
34.167	495.4100	1.11	Q	.	.	.	V.
34.250	495.4174	1.07	Q	.	.	.	V.
34.333	495.4245	1.03	Q	.	.	.	V.
34.417	495.4314	1.00	Q	.	.	.	V.
34.500	495.4380	0.96	Q	.	.	.	V.
34.583	495.4444	0.93	Q	.	.	.	V.
34.667	495.4506	0.90	Q	.	.	.	V.
34.750	495.4565	0.87	Q	.	.	.	V.
34.833	495.4623	0.84	Q	.	.	.	V.
34.917	495.4679	0.81	Q	.	.	.	V.
35.000	495.4732	0.78	Q	.	.	.	V.
35.083	495.4784	0.75	Q	.	.	.	V.
35.167	495.4834	0.72	Q	.	.	.	V.
35.250	495.4883	0.70	Q	.	.	.	V.
35.333	495.4929	0.68	Q	.	.	.	V.
35.417	495.4974	0.65	Q	.	.	.	V.
35.500	495.5017	0.63	Q	.	.	.	V.
35.583	495.5059	0.61	Q	.	.	.	V.
35.667	495.5099	0.59	Q	.	.	.	V.
35.750	495.5138	0.57	Q	.	.	.	V.
35.833	495.5176	0.55	Q	.	.	.	V.
35.917	495.5212	0.53	Q	.	.	.	V.
36.000	495.5247	0.51	Q	.	.	.	V.
36.083	495.5281	0.49	Q	.	.	.	V.
36.167	495.5314	0.47	Q	.	.	.	V.
36.250	495.5345	0.46	Q	.	.	.	V.
36.333	495.5375	0.44	Q	.	.	.	V.
36.417	495.5405	0.43	Q	.	.	.	V.
36.500	495.5433	0.41	Q	.	.	.	V.
36.583	495.5460	0.40	Q	.	.	.	V.

36.667	495.5486	0.38	Q	.	.	.	V.
36.750	495.5512	0.37	Q	.	.	.	V.
36.833	495.5536	0.36	Q	.	.	.	V.
36.917	495.5560	0.34	Q	.	.	.	V.
37.000	495.5583	0.33	Q	.	.	.	V.
37.083	495.5605	0.32	Q	.	.	.	V.
37.167	495.5626	0.31	Q	.	.	.	V.
37.250	495.5647	0.30	Q	.	.	.	V.
37.333	495.5667	0.29	Q	.	.	.	V.
37.417	495.5686	0.28	Q	.	.	.	V.
37.500	495.5704	0.27	Q	.	.	.	V.
37.583	495.5722	0.26	Q	.	.	.	V.
37.667	495.5739	0.25	Q	.	.	.	V.
37.750	495.5755	0.24	Q	.	.	.	V.
37.833	495.5771	0.23	Q	.	.	.	V.
37.917	495.5787	0.22	Q	.	.	.	V.
38.000	495.5802	0.22	Q	.	.	.	V.
38.083	495.5816	0.21	Q	.	.	.	V.
38.167	495.5830	0.20	Q	.	.	.	V.
38.250	495.5843	0.19	Q	.	.	.	V.
38.333	495.5856	0.19	Q	.	.	.	V.
38.417	495.5869	0.18	Q	.	.	.	V.
38.500	495.5880	0.17	Q	.	.	.	V.
38.583	495.5892	0.17	Q	.	.	.	V.
38.667	495.5903	0.16	Q	.	.	.	V.
38.750	495.5914	0.16	Q	.	.	.	V.
38.833	495.5924	0.15	Q	.	.	.	V.
38.917	495.5934	0.15	Q	.	.	.	V.
39.000	495.5944	0.14	Q	.	.	.	V.
39.083	495.5954	0.14	Q	.	.	.	V.
39.167	495.5963	0.13	Q	.	.	.	V.
39.250	495.5972	0.13	Q	.	.	.	V.
39.333	495.5980	0.12	Q	.	.	.	V.
39.417	495.5988	0.12	Q	.	.	.	V.
39.500	495.5996	0.11	Q	.	.	.	V.
39.583	495.6004	0.11	Q	.	.	.	V.
39.667	495.6011	0.11	Q	.	.	.	V.
39.750	495.6018	0.10	Q	.	.	.	V.
39.833	495.6025	0.10	Q	.	.	.	V.
39.917	495.6032	0.10	Q	.	.	.	V.
40.000	495.6038	0.09	Q	.	.	.	V.
40.083	495.6044	0.09	Q	.	.	.	V.
40.167	495.6050	0.09	Q	.	.	.	V.
40.250	495.6056	0.08	Q	.	.	.	V.
40.333	495.6061	0.08	Q	.	.	.	V.
40.417	495.6067	0.08	Q	.	.	.	V.
40.500	495.6072	0.07	Q	.	.	.	V.
40.583	495.6077	0.07	Q	.	.	.	V.
40.667	495.6082	0.07	Q	.	.	.	V.
40.750	495.6086	0.07	Q	.	.	.	V.
40.833	495.6091	0.07	Q	.	.	.	V.
40.917	495.6095	0.07	Q	.	.	.	V.
41.000	495.6100	0.07	Q	.	.	.	V.
41.083	495.6104	0.07	Q	.	.	.	V.
41.167	495.6109	0.07	Q	.	.	.	V.
41.250	495.6114	0.07	Q	.	.	.	V.
41.333	495.6118	0.07	Q	.	.	.	V.
41.417	495.6123	0.07	Q	.	.	.	V.

41.500	495.6127	0.07	Q	.	.	.	V.
41.583	495.6132	0.07	Q	.	.	.	V.
41.667	495.6136	0.07	Q	.	.	.	V.
41.750	495.6141	0.07	Q	.	.	.	V.
41.833	495.6146	0.07	Q	.	.	.	V.
41.917	495.6150	0.07	Q	.	.	.	V.
42.000	495.6155	0.07	Q	.	.	.	V.
42.083	495.6159	0.07	Q	.	.	.	V.
42.167	495.6164	0.07	Q	.	.	.	V.
42.250	495.6169	0.07	Q	.	.	.	V.
42.333	495.6173	0.07	Q	.	.	.	V.
42.417	495.6178	0.07	Q	.	.	.	V.
42.500	495.6182	0.07	Q	.	.	.	V.
42.583	495.6187	0.07	Q	.	.	.	V.
42.667	495.6191	0.07	Q	.	.	.	V.
42.750	495.6196	0.07	Q	.	.	.	V.
42.833	495.6201	0.07	Q	.	.	.	V.
42.917	495.6205	0.07	Q	.	.	.	V.
43.000	495.6210	0.07	Q	.	.	.	V.
43.083	495.6214	0.07	Q	.	.	.	V.
43.167	495.6219	0.07	Q	.	.	.	V.
43.250	495.6223	0.07	Q	.	.	.	V.
43.333	495.6228	0.07	Q	.	.	.	V.
43.417	495.6233	0.07	Q	.	.	.	V.
43.500	495.6237	0.07	Q	.	.	.	V.
43.583	495.6242	0.07	Q	.	.	.	V.
43.667	495.6246	0.07	Q	.	.	.	V.
43.750	495.6251	0.07	Q	.	.	.	V.
43.833	495.6255	0.07	Q	.	.	.	V.
43.917	495.6260	0.07	Q	.	.	.	V.
44.000	495.6265	0.07	Q	.	.	.	V.
44.083	495.6269	0.07	Q	.	.	.	V.
44.167	495.6274	0.07	Q	.	.	.	V.
44.250	495.6278	0.07	Q	.	.	.	V.
44.333	495.6283	0.07	Q	.	.	.	V.
44.417	495.6288	0.07	Q	.	.	.	V.
44.500	495.6292	0.07	Q	.	.	.	V.
44.583	495.6297	0.07	Q	.	.	.	V.
44.667	495.6301	0.07	Q	.	.	.	V.
44.750	495.6306	0.07	Q	.	.	.	V.
44.833	495.6310	0.07	Q	.	.	.	V.
44.917	495.6315	0.07	Q	.	.	.	V.
45.000	495.6320	0.07	Q	.	.	.	V.
45.083	495.6324	0.07	Q	.	.	.	V.
45.167	495.6329	0.07	Q	.	.	.	V.
45.250	495.6333	0.07	Q	.	.	.	V.
45.333	495.6338	0.07	Q	.	.	.	V.
45.417	495.6342	0.07	Q	.	.	.	V.
45.500	495.6347	0.07	Q	.	.	.	V.
45.583	495.6352	0.07	Q	.	.	.	V.
45.667	495.6356	0.07	Q	.	.	.	V.
45.750	495.6361	0.07	Q	.	.	.	V.
45.833	495.6365	0.07	Q	.	.	.	V.
45.917	495.6370	0.07	Q	.	.	.	V.
46.000	495.6375	0.07	Q	.	.	.	V.
46.083	495.6379	0.07	Q	.	.	.	V.
46.167	495.6384	0.07	Q	.	.	.	V.
46.250	495.6388	0.07	Q	.	.	.	V.

46.333	495.6393	0.07	Q	.	.	.	V.
46.417	495.6397	0.07	Q	.	.	.	V.
46.500	495.6402	0.07	Q	.	.	.	V.
46.583	495.6407	0.07	Q	.	.	.	V.
46.667	495.6411	0.07	Q	.	.	.	V.
46.750	495.6416	0.07	Q	.	.	.	V.
46.833	495.6420	0.07	Q	.	.	.	V.
46.917	495.6425	0.07	Q	.	.	.	V.
47.000	495.6429	0.07	Q	.	.	.	V.
47.083	495.6434	0.07	Q	.	.	.	V.
47.167	495.6439	0.07	Q	.	.	.	V.
47.250	495.6443	0.07	Q	.	.	.	V.
47.333	495.6448	0.07	Q	.	.	.	V.
47.417	495.6452	0.07	Q	.	.	.	V.
47.500	495.6457	0.07	Q	.	.	.	V.
47.583	495.6461	0.07	Q	.	.	.	V.
47.667	495.6466	0.07	Q	.	.	.	V.
47.750	495.6471	0.07	Q	.	.	.	V.
47.833	495.6475	0.07	Q	.	.	.	V.
47.917	495.6480	0.07	Q	.	.	.	V.
48.000	495.6484	0.07	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	2885.0
10%	855.0
20%	370.0
30%	245.0
40%	175.0
50%	120.0
60%	100.0
70%	80.0
80%	60.0
90%	40.0

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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED C *
* UNIT HYDROGRAPH - COMPLEX MODEL - SINGLE BASIN *
* 2-YR EV APRIL 2023 ROKAMOTO *

FILE NAME: 3C02EVC.DAT
TIME/DATE OF STUDY: 12:30 04/29/2023

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 712.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.369 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.201
LOW LOSS FRACTION = 0.412
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.13
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.28
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.37
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.62
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 0.85
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 1.44

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 22.584

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.325	114.155
2	5.978	401.047
3	17.110	959.378
4	31.865	1271.551
5	50.538	1609.219
6	68.546	1551.964
7	81.012	1074.286
8	88.862	676.510
9	93.529	402.243
10	96.354	243.410
11	97.929	135.753
12	98.463	46.068
13	98.887	36.484
14	99.310	36.461
15	99.724	35.687
16	99.931	17.843
17	100.000	5.948

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 33.0953
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 52.1677

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	75.0	150.0	225.0	300.0
0.083	0.0009	0.13	Q	.	.	.	.
0.167	0.0049	0.58	Q	.	.	.	.
0.250	0.0162	1.65	Q	.	.	.	.
0.333	0.0375	3.08	Q	.	.	.	.
0.417	0.0712	4.89	Q	.	.	.	.
0.500	0.1169	6.65	Q	.	.	.	.
0.583	0.1711	7.87	VQ	.	.	.	.
0.667	0.2307	8.65	VQ	.	.	.	.
0.750	0.2936	9.13	VQ	.	.	.	.
0.833	0.3586	9.43	VQ	.	.	.	.
0.917	0.4249	9.62	VQ	.	.	.	.
1.000	0.4917	9.70	VQ	.	.	.	.
1.083	0.5590	9.77	VQ	.	.	.	.
1.167	0.6268	9.85	VQ	.	.	.	.
1.250	0.6951	9.92	VQ	.	.	.	.
1.333	0.7638	9.98	VQ	.	.	.	.
1.417	0.8328	10.02	VQ	.	.	.	.
1.500	0.9021	10.05	VQ	.	.	.	.
1.583	0.9715	10.09	VQ	.	.	.	.
1.667	1.0412	10.12	VQ	.	.	.	.
1.750	1.1112	10.16	VQ	.	.	.	.
1.833	1.1814	10.19	VQ	.	.	.	.
1.917	1.2518	10.23	VQ	.	.	.	.
2.000	1.3225	10.26	.Q	.	.	.	.
2.083	1.3934	10.30	.Q	.	.	.	.
2.167	1.4646	10.34	.Q	.	.	.	.
2.250	1.5361	10.38	.Q	.	.	.	.
2.333	1.6078	10.41	.Q	.	.	.	.
2.417	1.6798	10.45	.Q	.	.	.	.
2.500	1.7520	10.49	.Q	.	.	.	.
2.583	1.8246	10.53	.Q	.	.	.	.
2.667	1.8973	10.57	.Q	.	.	.	.
2.750	1.9704	10.61	.Q	.	.	.	.
2.833	2.0437	10.65	.Q	.	.	.	.
2.917	2.1174	10.69	.Q	.	.	.	.
3.000	2.1913	10.73	.Q	.	.	.	.
3.083	2.2654	10.77	.Q	.	.	.	.
3.167	2.3399	10.81	.Q	.	.	.	.
3.250	2.4147	10.86	.Q	.	.	.	.
3.333	2.4897	10.90	.Q	.	.	.	.
3.417	2.5651	10.94	.Q	.	.	.	.
3.500	2.6407	10.98	.QV	.	.	.	.
3.583	2.7167	11.03	.QV	.	.	.	.
3.667	2.7929	11.07	.QV	.	.	.	.
3.750	2.8695	11.12	.QV	.	.	.	.
3.833	2.9464	11.16	.QV	.	.	.	.
3.917	3.0236	11.21	.QV	.	.	.	.

4.000	3.1011	11.25	.QV	.	.	.	.
4.083	3.1789	11.30	.QV	.	.	.	.
4.167	3.2571	11.35	.QV	.	.	.	.
4.250	3.3356	11.40	.QV	.	.	.	.
4.333	3.4144	11.45	.QV	.	.	.	.
4.417	3.4935	11.49	.QV	.	.	.	.
4.500	3.5730	11.54	.QV	.	.	.	.
4.583	3.6529	11.59	.QV	.	.	.	.
4.667	3.7331	11.64	.QV	.	.	.	.
4.750	3.8136	11.70	.QV	.	.	.	.
4.833	3.8945	11.75	.QV	.	.	.	.
4.917	3.9758	11.80	.Q V	.	.	.	.
5.000	4.0574	11.85	.Q V	.	.	.	.
5.083	4.1394	11.91	.Q V	.	.	.	.
5.167	4.2218	11.96	.Q V	.	.	.	.
5.250	4.3046	12.02	.Q V	.	.	.	.
5.333	4.3877	12.07	.Q V	.	.	.	.
5.417	4.4712	12.13	.Q V	.	.	.	.
5.500	4.5551	12.18	.Q V	.	.	.	.
5.583	4.6394	12.24	.Q V	.	.	.	.
5.667	4.7241	12.30	.Q V	.	.	.	.
5.750	4.8093	12.36	.Q V	.	.	.	.
5.833	4.8948	12.42	.Q V	.	.	.	.
5.917	4.9807	12.48	.Q V	.	.	.	.
6.000	5.0671	12.54	.Q V	.	.	.	.
6.083	5.1539	12.60	.Q V	.	.	.	.
6.167	5.2412	12.67	.Q V	.	.	.	.
6.250	5.3288	12.73	.Q V	.	.	.	.
6.333	5.4170	12.80	.Q V	.	.	.	.
6.417	5.5055	12.86	.Q V	.	.	.	.
6.500	5.5946	12.93	.Q V	.	.	.	.
6.583	5.6841	12.99	.Q V	.	.	.	.
6.667	5.7740	13.06	.Q V	.	.	.	.
6.750	5.8645	13.13	.Q V	.	.	.	.
6.833	5.9554	13.20	.Q V	.	.	.	.
6.917	6.0468	13.27	.Q V	.	.	.	.
7.000	6.1387	13.35	.Q V	.	.	.	.
7.083	6.2311	13.42	.Q V	.	.	.	.
7.167	6.3241	13.49	.Q V	.	.	.	.
7.250	6.4175	13.57	.Q V	.	.	.	.
7.333	6.5115	13.65	.Q V	.	.	.	.
7.417	6.6060	13.72	.Q V	.	.	.	.
7.500	6.7011	13.80	.Q V	.	.	.	.
7.583	6.7967	13.88	.Q V	.	.	.	.
7.667	6.8928	13.96	.Q V	.	.	.	.
7.750	6.9896	14.05	.Q V	.	.	.	.
7.833	7.0869	14.13	.Q V	.	.	.	.
7.917	7.1848	14.22	.Q V	.	.	.	.
8.000	7.2833	14.30	.Q V	.	.	.	.
8.083	7.3824	14.39	.Q V	.	.	.	.
8.167	7.4821	14.48	.Q V	.	.	.	.
8.250	7.5824	14.57	.Q V	.	.	.	.
8.333	7.6834	14.66	.Q V	.	.	.	.
8.417	7.7850	14.76	.Q V	.	.	.	.
8.500	7.8873	14.85	.Q V	.	.	.	.
8.583	7.9902	14.95	.Q V	.	.	.	.
8.667	8.0939	15.05	. Q V	.	.	.	.
8.750	8.1982	15.15	. Q V	.	.	.	.

8.833	8.3032	15.25	. Q	V	.	.	.	.
8.917	8.4090	15.35	. Q	V	.	.	.	.
9.000	8.5154	15.46	. Q	V	.	.	.	.
9.083	8.6226	15.57	. Q	V	.	.	.	.
9.167	8.7306	15.68	. Q	V	.	.	.	.
9.250	8.8393	15.79	. Q	V	.	.	.	.
9.333	8.9489	15.90	. Q	V	.	.	.	.
9.417	9.0592	16.02	. Q	V	.	.	.	.
9.500	9.1703	16.14	. Q	V	.	.	.	.
9.583	9.2823	16.26	. Q	V	.	.	.	.
9.667	9.3951	16.38	. Q	V	.	.	.	.
9.750	9.5088	16.51	. Q	V	.	.	.	.
9.833	9.6234	16.64	. Q	V	.	.	.	.
9.917	9.7389	16.77	. Q	V	.	.	.	.
10.000	9.8553	16.90	. Q	V	.	.	.	.
10.083	9.9726	17.04	. Q	V	.	.	.	.
10.167	10.0909	17.18	. Q	V	.	.	.	.
10.250	10.2102	17.32	. Q	V	.	.	.	.
10.333	10.3304	17.46	. Q	V	.	.	.	.
10.417	10.4517	17.61	. Q	V	.	.	.	.
10.500	10.5741	17.76	. Q	V	.	.	.	.
10.583	10.6975	17.92	. Q	V	.	.	.	.
10.667	10.8220	18.08	. Q	V	.	.	.	.
10.750	10.9476	18.24	. Q	V	.	.	.	.
10.833	11.0744	18.41	. Q	V	.	.	.	.
10.917	11.2024	18.58	. Q	V	.	.	.	.
11.000	11.3316	18.76	. Q	V	.	.	.	.
11.083	11.4620	18.94	. Q	V	.	.	.	.
11.167	11.5937	19.12	. Q	V	.	.	.	.
11.250	11.7266	19.31	. Q	V	.	.	.	.
11.333	11.8609	19.50	. Q	V	.	.	.	.
11.417	11.9966	19.70	. Q	V	.	.	.	.
11.500	12.1337	19.91	. Q	V	.	.	.	.
11.583	12.2723	20.12	. Q	V	.	.	.	.
11.667	12.4123	20.33	. Q	V	.	.	.	.
11.750	12.5539	20.56	. Q	V	.	.	.	.
11.833	12.6970	20.78	. Q	V	.	.	.	.
11.917	12.8418	21.02	. Q	V	.	.	.	.
12.000	12.9882	21.26	. Q	V	.	.	.	.
12.083	13.1368	21.58	. Q	V	.	.	.	.
12.167	13.2887	22.05	. Q	V	.	.	.	.
12.250	13.4461	22.85	. Q	V	.	.	.	.
12.333	13.6102	23.83	. Q	V	.	.	.	.
12.417	13.7825	25.01	. Q	V	.	.	.	.
12.500	13.9627	26.17	. Q	V	.	.	.	.
12.583	14.1492	27.08	. Q	V	.	.	.	.
12.667	14.3406	27.78	. Q	V	.	.	.	.
12.750	14.5358	28.35	. Q	.V	.	.	.	.
12.833	14.7344	28.83	. Q	.V	.	.	.	.
12.917	14.9360	29.28	. Q	.V	.	.	.	.
13.000	15.1404	29.68	. Q	.V	.	.	.	.
13.083	15.3477	30.10	. Q	.V	.	.	.	.
13.167	15.5579	30.52	. Q	.V	.	.	.	.
13.250	15.7712	30.97	. Q	.V	.	.	.	.
13.333	15.9876	31.43	. Q	.V	.	.	.	.
13.417	16.2073	31.89	. Q	.V	.	.	.	.
13.500	16.4303	32.37	. Q	.V	.	.	.	.
13.583	16.6567	32.88	. Q	.V	.	.	.	.

13.667	16.8868	33.41	. Q	. V	.	.	.	.
13.750	17.1207	33.96	. Q	. V	.	.	.	.
13.833	17.3586	34.54	. Q	. V	.	.	.	.
13.917	17.6007	35.16	. Q	. V	.	.	.	.
14.000	17.8473	35.79	. Q	. V	.	.	.	.
14.083	18.0989	36.54	. Q	. V	.	.	.	.
14.167	18.3569	37.47	. Q	. V	.	.	.	.
14.250	18.6238	38.75	. Q	. V	.	.	.	.
14.333	18.9010	40.25	. Q	. V	.	.	.	.
14.417	19.1902	41.99	. Q	. V	.	.	.	.
14.500	19.4915	43.75	. Q	. V	.	.	.	.
14.583	19.8036	45.31	. Q	. V	.	.	.	.
14.667	20.1254	46.72	. Q	. V	.	.	.	.
14.750	20.4564	48.07	. Q	. V	.	.	.	.
14.833	20.7967	49.40	. Q	. V	.	.	.	.
14.917	21.1464	50.79	. Q	. V	.	.	.	.
15.000	21.5061	52.22	. Q	. V	.	.	.	.
15.083	21.8766	53.80	. Q	. V	.	.	.	.
15.167	22.2590	55.51	. Q	. V	.	.	.	.
15.250	22.6545	57.43	. Q	. V	.	.	.	.
15.333	23.0645	59.53	. Q	. V	.	.	.	.
15.417	23.4893	61.69	. Q	. V	.	.	.	.
15.500	23.9271	63.57	. Q	. V	.	.	.	.
15.583	24.3735	64.82	. Q	. V	.	.	.	.
15.667	24.8276	65.93	. Q	. V	.	.	.	.
15.750	25.2908	67.26	. Q	. V	.	.	.	.
15.833	25.7721	69.87	. Q	. V	.	.	.	.
15.917	26.2935	75.71	. Q	. V	.	.	.	.
16.000	26.8840	85.74	. Q	. V	.	.	.	.
16.083	27.6472	110.81	. Q	. V	.	.	.	.
16.167	28.7068	153.85	. Q	. V	.	.	.	.
16.250	30.2033	217.29	. Q	. V	. Q	.	.	.
16.333	31.9498	253.59	. Q	. V	. Q	.	.	.
16.417	33.8837	280.80	. Q	. V	. Q	.	.	.
16.500	35.6995	263.65	. Q	. V	. Q	.	.	.
16.583	37.1197	206.22	. Q	. V	. Q	.	.	.
16.667	38.1950	156.13	. Q	. V	. Q	.	.	.
16.750	39.0235	120.29	. Q	. V	. Q	.	.	.
16.833	39.6940	97.36	. Q	. V	. Q	.	.	.
16.917	40.2495	80.66	. Q	. V	. Q	.	.	.
17.000	40.7132	67.32	. Q	. V	. Q	.	.	.
17.083	41.1407	62.08	. Q	. V	. Q	.	.	.
17.167	41.5421	58.29	. Q	. V	. Q	.	.	.
17.250	41.9171	54.44	. Q	. V	. Q	.	.	.
17.333	42.2563	49.25	. Q	. V	. Q	.	.	.
17.417	42.5649	44.82	. Q	. V	. Q	.	.	.
17.500	42.8500	41.39	. Q	. V	. Q	.	.	.
17.583	43.1190	39.06	. Q	. V	. Q	.	.	.
17.667	43.3750	37.17	. Q	. V	. Q	.	.	.
17.750	43.6200	35.58	. Q	. V	. Q	.	.	.
17.833	43.8557	34.22	. Q	. V	. Q	.	.	.
17.917	44.0832	33.03	. Q	. V	. Q	.	.	.
18.000	44.3036	32.00	. Q	. V	. Q	.	.	.
18.083	44.5170	30.99	. Q	. V	. Q	.	.	.
18.167	44.7230	29.90	. Q	. V	. Q	.	.	.
18.250	44.9197	28.57	. Q	. V	. Q	.	.	.
18.333	45.1066	27.14	. Q	. V	. Q	.	.	.
18.417	45.2828	25.58	. Q	. V	. Q	.	.	.

18.500	45.4488	24.10	. Q	.	.	.	V	.
18.583	45.6067	22.94	. Q	.	.	.	V	.
18.667	45.7584	22.03	. Q	.	.	.	V	.
18.750	45.9052	21.31	. Q	.	.	.	V	.
18.833	46.0478	20.71	. Q	.	.	.	V	.
18.917	46.1869	20.19	. Q	.	.	.	V	.
19.000	46.3229	19.75	. Q	.	.	.	V	.
19.083	46.4561	19.34	. Q	.	.	.	V	.
19.167	46.5866	18.94	. Q	.	.	.	V	.
19.250	46.7144	18.57	. Q	.	.	.	V	.
19.333	46.8399	18.22	. Q	.	.	.	V	.
19.417	46.9632	17.89	. Q	.	.	.	V	.
19.500	47.0843	17.59	. Q	.	.	.	V	.
19.583	47.2034	17.29	. Q	.	.	.	V	.
19.667	47.3206	17.01	. Q	.	.	.	V	.
19.750	47.4359	16.74	. Q	.	.	.	V	.
19.833	47.5494	16.48	. Q	.	.	.	V	.
19.917	47.6612	16.23	. Q	.	.	.	V	.
20.000	47.7713	16.00	. Q	.	.	.	V	.
20.083	47.8799	15.77	. Q	.	.	.	V	.
20.167	47.9870	15.54	. Q	.	.	.	V	.
20.250	48.0926	15.33	. Q	.	.	.	V	.
20.333	48.1967	15.13	. Q	.	.	.	V	.
20.417	48.2995	14.93	. Q	.	.	.	V	.
20.500	48.4010	14.73	. Q	.	.	.	V	.
20.583	48.5012	14.55	. Q	.	.	.	V	.
20.667	48.6002	14.37	. Q	.	.	.	V	.
20.750	48.6979	14.19	. Q	.	.	.	V	.
20.833	48.7945	14.03	. Q	.	.	.	V	.
20.917	48.8900	13.86	. Q	.	.	.	V	.
21.000	48.9844	13.70	. Q	.	.	.	V	.
21.083	49.0777	13.55	. Q	.	.	.	V	.
21.167	49.1700	13.40	. Q	.	.	.	V	.
21.250	49.2613	13.26	. Q	.	.	.	V	.
21.333	49.3516	13.11	. Q	.	.	.	V	.
21.417	49.4410	12.98	. Q	.	.	.	V	.
21.500	49.5294	12.84	. Q	.	.	.	V	.
21.583	49.6170	12.71	. Q	.	.	.	V	.
21.667	49.7037	12.59	. Q	.	.	.	V	.
21.750	49.7895	12.46	. Q	.	.	.	V	.
21.833	49.8745	12.34	. Q	.	.	.	V	.
21.917	49.9587	12.23	. Q	.	.	.	V	.
22.000	50.0421	12.11	. Q	.	.	.	V	.
22.083	50.1248	12.00	. Q	.	.	.	V	.
22.167	50.2067	11.89	. Q	.	.	.	V	.
22.250	50.2878	11.78	. Q	.	.	.	V	.
22.333	50.3683	11.68	. Q	.	.	.	V	.
22.417	50.4480	11.58	. Q	.	.	.	V	.
22.500	50.5271	11.48	. Q	.	.	.	V	.
22.583	50.6055	11.38	. Q	.	.	.	V	.
22.667	50.6832	11.29	. Q	.	.	.	V	.
22.750	50.7603	11.20	. Q	.	.	.	V	.
22.833	50.8368	11.10	. Q	.	.	.	V	.
22.917	50.9127	11.01	. Q	.	.	.	V	.
23.000	50.9879	10.93	. Q	.	.	.	V	.
23.083	51.0626	10.84	. Q	.	.	.	V	.
23.167	51.1367	10.76	. Q	.	.	.	V	.
23.250	51.2102	10.68	. Q	.	.	.	V	.

23.333	51.2832	10.60	.Q	.	.	.	V	.
23.417	51.3556	10.52	.Q	.	.	.	V	.
23.500	51.4275	10.44	.Q	.	.	.	V	.
23.583	51.4989	10.36	.Q	.	.	.	V	.
23.667	51.5698	10.29	.Q	.	.	.	V	.
23.750	51.6401	10.22	.Q	.	.	.	V	.
23.833	51.7100	10.15	.Q	.	.	.	V	.
23.917	51.7794	10.08	.Q	.	.	.	V	.
24.000	51.8483	10.01	.Q	.	.	.	V	.
24.083	51.9159	9.81	.Q	.	.	.	V	.
24.167	51.9799	9.30	.Q	.	.	.	V	.
24.250	52.0361	8.16	.Q	.	.	.	V	.
24.333	52.0822	6.69	Q	.	.	.	V	.
24.417	52.1156	4.85	Q	.	.	.	V	.
24.500	52.1368	3.08	Q	.	.	.	V	.
24.583	52.1496	1.86	Q	.	.	.	V	.
24.667	52.1571	1.09	Q	.	.	.	V	.
24.750	52.1614	0.63	Q	.	.	.	V	.
24.833	52.1639	0.36	Q	.	.	.	V	.
24.917	52.1653	0.20	Q	.	.	.	V	.
25.000	52.1663	0.15	Q	.	.	.	V	.
25.083	52.1671	0.11	Q	.	.	.	V	.
25.167	52.1675	0.07	Q	.	.	.	V	.
25.250	52.1677	0.03	Q	.	.	.	V	.
25.333	52.1678	0.01	Q	.	.	.	V	.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1520.0
10%	335.0
20%	120.0
30%	55.0
40%	40.0
50%	35.0
60%	25.0
70%	25.0
80%	15.0
90%	15.0

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

 >>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 462.500 ACRES
 BASEFLOW = 0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME = 0.329 HOURS
 CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
 THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)

MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.270
 LOW LOSS FRACTION = 0.506
 HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.13
 SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 0.28
 SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 0.37
 SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 0.62
 SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 0.85
 SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 1.44

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
 5-MINUTE FACTOR = 0.942
 30-MINUTE FACTOR = 0.942
 1-HOUR FACTOR = 0.942
 3-HOUR FACTOR = 0.991
 6-HOUR FACTOR = 0.996
 24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
 UNIT INTERVAL PERCENTAGE OF LAG-TIME = 25.329

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.520	84.993
2	7.611	340.712
3	21.313	766.422
4	39.531	1018.978
5	60.775	1188.255
6	77.434	931.816
7	87.530	564.710
8	93.167	315.278
9	96.410	181.374
10	98.047	91.593
11	98.580	29.825
12	99.055	26.572
13	99.531	26.572
14	100.000	26.259

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 26.4883
 TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 28.8528

24 - HOUR STORM
 RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	50.0	100.0	150.0	200.0
0.083	0.0006	0.08	Q	.	.	.	.
0.167	0.0033	0.40	Q	.	.	.	.
0.250	0.0110	1.12	Q	.	.	.	.
0.333	0.0254	2.08	Q	.	.	.	.
0.417	0.0475	3.21	Q	.	.	.	.
0.500	0.0757	4.10	Q	.	.	.	.
0.583	0.1077	4.64	Q	.	.	.	.
0.667	0.1418	4.95	Q	.	.	.	.
0.750	0.1772	5.14	VQ	.	.	.	.
0.833	0.2133	5.24	VQ	.	.	.	.
0.917	0.2497	5.29	VQ	.	.	.	.
1.000	0.2864	5.33	VQ	.	.	.	.
1.083	0.3234	5.37	VQ	.	.	.	.
1.167	0.3607	5.42	VQ	.	.	.	.
1.250	0.3981	5.43	VQ	.	.	.	.
1.333	0.4357	5.45	VQ	.	.	.	.
1.417	0.4733	5.47	VQ	.	.	.	.
1.500	0.5111	5.49	VQ	.	.	.	.
1.583	0.5491	5.51	VQ	.	.	.	.
1.667	0.5872	5.53	VQ	.	.	.	.
1.750	0.6254	5.55	VQ	.	.	.	.
1.833	0.6637	5.57	VQ	.	.	.	.
1.917	0.7022	5.59	VQ	.	.	.	.
2.000	0.7408	5.61	.Q	.	.	.	.
2.083	0.7796	5.63	.Q	.	.	.	.
2.167	0.8185	5.65	.Q	.	.	.	.
2.250	0.8575	5.67	.Q	.	.	.	.
2.333	0.8967	5.69	.Q	.	.	.	.
2.417	0.9360	5.71	.Q	.	.	.	.
2.500	0.9755	5.73	.Q	.	.	.	.
2.583	1.0151	5.75	.Q	.	.	.	.
2.667	1.0548	5.77	.Q	.	.	.	.
2.750	1.0948	5.80	.Q	.	.	.	.
2.833	1.1348	5.82	.Q	.	.	.	.
2.917	1.1750	5.84	.Q	.	.	.	.
3.000	1.2154	5.86	.Q	.	.	.	.
3.083	1.2559	5.88	.Q	.	.	.	.
3.167	1.2966	5.91	.Q	.	.	.	.
3.250	1.3375	5.93	.Q	.	.	.	.
3.333	1.3785	5.95	.Q	.	.	.	.
3.417	1.4197	5.98	.Q	.	.	.	.
3.500	1.4610	6.00	.QV	.	.	.	.
3.583	1.5025	6.03	.QV	.	.	.	.
3.667	1.5441	6.05	.QV	.	.	.	.
3.750	1.5860	6.07	.QV	.	.	.	.
3.833	1.6280	6.10	.QV	.	.	.	.
3.917	1.6702	6.12	.QV	.	.	.	.

4.000	1.7125	6.15	.QV	.	.	.	.
4.083	1.7550	6.18	.QV	.	.	.	.
4.167	1.7978	6.20	.QV	.	.	.	.
4.250	1.8406	6.23	.QV	.	.	.	.
4.333	1.8837	6.25	.QV	.	.	.	.
4.417	1.9270	6.28	.QV	.	.	.	.
4.500	1.9704	6.31	.QV	.	.	.	.
4.583	2.0141	6.34	.QV	.	.	.	.
4.667	2.0579	6.36	.QV	.	.	.	.
4.750	2.1019	6.39	.QV	.	.	.	.
4.833	2.1461	6.42	.QV	.	.	.	.
4.917	2.1905	6.45	.Q V	.	.	.	.
5.000	2.2351	6.48	.Q V	.	.	.	.
5.083	2.2800	6.51	.Q V	.	.	.	.
5.167	2.3250	6.54	.Q V	.	.	.	.
5.250	2.3702	6.57	.Q V	.	.	.	.
5.333	2.4156	6.60	.Q V	.	.	.	.
5.417	2.4613	6.63	.Q V	.	.	.	.
5.500	2.5072	6.66	.Q V	.	.	.	.
5.583	2.5532	6.69	.Q V	.	.	.	.
5.667	2.5995	6.72	.Q V	.	.	.	.
5.750	2.6461	6.76	.Q V	.	.	.	.
5.833	2.6928	6.79	.Q V	.	.	.	.
5.917	2.7398	6.82	.Q V	.	.	.	.
6.000	2.7870	6.86	.Q V	.	.	.	.
6.083	2.8345	6.89	.Q V	.	.	.	.
6.167	2.8822	6.92	.Q V	.	.	.	.
6.250	2.9301	6.96	.Q V	.	.	.	.
6.333	2.9783	6.99	.Q V	.	.	.	.
6.417	3.0267	7.03	.Q V	.	.	.	.
6.500	3.0754	7.07	.Q V	.	.	.	.
6.583	3.1243	7.10	.Q V	.	.	.	.
6.667	3.1735	7.14	.Q V	.	.	.	.
6.750	3.2229	7.18	.Q V	.	.	.	.
6.833	3.2726	7.22	.Q V	.	.	.	.
6.917	3.3226	7.26	.Q V	.	.	.	.
7.000	3.3729	7.30	.Q V	.	.	.	.
7.083	3.4234	7.34	.Q V	.	.	.	.
7.167	3.4742	7.38	.Q V	.	.	.	.
7.250	3.5253	7.42	.Q V	.	.	.	.
7.333	3.5767	7.46	.Q V	.	.	.	.
7.417	3.6284	7.50	.Q V	.	.	.	.
7.500	3.6804	7.55	.Q V	.	.	.	.
7.583	3.7327	7.59	.Q V	.	.	.	.
7.667	3.7853	7.64	.Q V	.	.	.	.
7.750	3.8382	7.68	.Q V	.	.	.	.
7.833	3.8914	7.73	.Q V	.	.	.	.
7.917	3.9449	7.77	.Q V	.	.	.	.
8.000	3.9988	7.82	.Q V	.	.	.	.
8.083	4.0530	7.87	.Q V	.	.	.	.
8.167	4.1075	7.92	.Q V	.	.	.	.
8.250	4.1624	7.97	.Q V	.	.	.	.
8.333	4.2177	8.02	.Q V	.	.	.	.
8.417	4.2732	8.07	.Q V	.	.	.	.
8.500	4.3292	8.12	.Q V	.	.	.	.
8.583	4.3855	8.18	.Q V	.	.	.	.
8.667	4.4422	8.23	.Q V	.	.	.	.
8.750	4.4993	8.29	.Q V	.	.	.	.

8.833	4.5567	8.34	.Q	V	.	.	.
8.917	4.6146	8.40	.Q	V	.	.	.
9.000	4.6729	8.46	.Q	V	.	.	.
9.083	4.7315	8.52	.Q	V	.	.	.
9.167	4.7906	8.58	.Q	V	.	.	.
9.250	4.8501	8.64	.Q	V	.	.	.
9.333	4.9101	8.70	.Q	V	.	.	.
9.417	4.9704	8.77	.Q	V	.	.	.
9.500	5.0313	8.83	.Q	V	.	.	.
9.583	5.0925	8.90	.Q	V	.	.	.
9.667	5.1543	8.97	.Q	V	.	.	.
9.750	5.2165	9.04	.Q	V	.	.	.
9.833	5.2792	9.11	.Q	V	.	.	.
9.917	5.3425	9.18	.Q	V	.	.	.
10.000	5.4062	9.25	.Q	V	.	.	.
10.083	5.4704	9.33	.Q	V	.	.	.
10.167	5.5352	9.40	.Q	V	.	.	.
10.250	5.6005	9.48	.Q	V	.	.	.
10.333	5.6664	9.56	.Q	V	.	.	.
10.417	5.7328	9.65	.Q	V	.	.	.
10.500	5.7998	9.73	.Q	V	.	.	.
10.583	5.8674	9.81	.Q	V	.	.	.
10.667	5.9356	9.90	.Q	V	.	.	.
10.750	6.0044	9.99	.Q	V	.	.	.
10.833	6.0738	10.08	.Q	V	.	.	.
10.917	6.1439	10.18	.Q	V	.	.	.
11.000	6.2147	10.28	.Q	V	.	.	.
11.083	6.2862	10.37	.Q	V	.	.	.
11.167	6.3583	10.48	.Q	V	.	.	.
11.250	6.4312	10.58	.Q	V	.	.	.
11.333	6.5048	10.69	.Q	V	.	.	.
11.417	6.5792	10.80	.Q	V	.	.	.
11.500	6.6543	10.91	.Q	V	.	.	.
11.583	6.7302	11.03	.Q	V	.	.	.
11.667	6.8070	11.15	.Q	V	.	.	.
11.750	6.8846	11.27	.Q	V	.	.	.
11.833	6.9631	11.40	.Q	V	.	.	.
11.917	7.0425	11.53	.Q	V	.	.	.
12.000	7.1228	11.66	.Q	V	.	.	.
12.083	7.2043	11.84	.Q	V	.	.	.
12.167	7.2879	12.14	.Q	V	.	.	.
12.250	7.3750	12.64	.Q	V	.	.	.
12.333	7.4664	13.27	.Q	V	.	.	.
12.417	7.5627	13.98	.Q	V	.	.	.
12.500	7.6632	14.58	.Q	V	.	.	.
12.583	7.7666	15.02	.Q	V	.	.	.
12.667	7.8724	15.35	.Q	V	.	.	.
12.750	7.9800	15.63	.Q	.V	.	.	.
12.833	8.0892	15.86	.Q	.V	.	.	.
12.917	8.2000	16.08	.Q	.V	.	.	.
13.000	8.3122	16.30	.Q	.V	.	.	.
13.083	8.4261	16.54	.Q	.V	.	.	.
13.167	8.5417	16.77	.Q	.V	.	.	.
13.250	8.6588	17.01	.Q	.V	.	.	.
13.333	8.7777	17.26	.Q	.V	.	.	.
13.417	8.8983	17.52	.Q	.V	.	.	.
13.500	9.0208	17.79	.Q	.V	.	.	.
13.583	9.1453	18.07	.Q	.V	.	.	.

13.667	9.2717	18.36	.	Q	.	V	.	.	.
13.750	9.4003	18.67	.	Q	.	V	.	.	.
13.833	9.5311	18.99	.	Q	.	V	.	.	.
13.917	9.6643	19.34	.	Q	.	V	.	.	.
14.000	9.7999	19.69	.	Q	.	V	.	.	.
14.083	9.9385	20.11	.	Q	.	V	.	.	.
14.167	10.0808	20.67	.	Q	.	V	.	.	.
14.250	10.2285	21.45	.	Q	.	V	.	.	.
14.333	10.3825	22.36	.	Q	.	V	.	.	.
14.417	10.5436	23.39	.	Q	.	V	.	.	.
14.500	10.7112	24.33	.	Q	.	V	.	.	.
14.583	10.8844	25.14	.	Q	.	V	.	.	.
14.667	11.0625	25.87	.	Q	.	V	.	.	.
14.750	11.2456	26.59	.	Q	.	V	.	.	.
14.833	11.4337	27.31	.	Q	.	V	.	.	.
14.917	11.6270	28.06	.	Q	.	V	.	.	.
15.000	11.8258	28.87	.	Q	.	V	.	.	.
15.083	12.0309	29.77	.	Q	.	V	.	.	.
15.167	12.2427	30.75	.	Q	.	V	.	.	.
15.250	12.4619	31.83	.	Q	.	V	.	.	.
15.333	12.6893	33.02	.	Q	.	V	.	.	.
15.417	12.9252	34.25	.	Q	.	V	.	.	.
15.500	13.1678	35.23	.	Q	.	V	.	.	.
15.583	13.4142	35.78	.	Q	.	V	.	.	.
15.667	13.6635	36.20	.	Q	.	V	.	.	.
15.750	13.9175	36.88	.	Q	.	V	.	.	.
15.833	14.1842	38.73	.	Q	.	V	.	.	.
15.917	14.4777	42.61	.	Q	.	V	.	.	.
16.000	14.8157	49.08	.	Q	.	V	.	.	.
16.083	15.2689	65.80	.	.	Q	.	V	.	.
16.167	15.9441	98.04	.	.	.	Q.	V	.	.
16.250	16.9226	142.08	.	.	.	.	V	Q	.
16.333	18.0680	166.31	.	.	.	.	.	V	Q
16.417	19.2794	175.90	.	.	.	.	.	V	Q
16.500	20.2793	145.18	.	.	.	.	.	VQ.	.
16.583	20.9991	104.52	.	.	.	Q	.	V.	.
16.667	21.5189	75.47	.	.	Q	.	.	V.	.
16.750	21.9212	58.41	.	.	Q	.	.	V	.
16.833	22.2419	46.58	.	.	Q.	.	.	V	.
16.917	22.5046	38.14	.	.	Q	.	.	V	.
17.000	22.7479	35.32	.	.	Q	.	.	V	.
17.083	22.9761	33.14	.	.	Q	.	.	V	.
17.167	23.1893	30.95	.	.	Q	.	.	V	.
17.250	23.3732	26.70	.	.	Q	.	.	V	.
17.333	23.5442	24.83	.	.	Q	.	.	V	.
17.417	23.7036	23.15	.	.	Q	.	.	V	.
17.500	23.8535	21.76	.	.	Q	.	.	V	.
17.583	23.9955	20.62	.	.	Q	.	.	V	.
17.667	24.1312	19.70	.	.	Q	.	.	V	.
17.750	24.2616	18.92	.	.	Q	.	.	V	.
17.833	24.3873	18.25	.	.	Q	.	.	V	.
17.917	24.5090	17.67	.	.	Q	.	.	V	.
18.000	24.6270	17.14	.	.	Q	.	.	V	.
18.083	24.7414	16.61	.	.	Q	.	.	V	.
18.167	24.8516	16.00	.	.	Q	.	.	V	.
18.250	24.9565	15.24	.	.	Q	.	.	V	.
18.333	25.0556	14.39	.	.	Q	.	.	V	.
18.417	25.1485	13.49	.	.	Q	.	.	V	.

18.500	25.2362	12.73	.	Q	.	.	.	.	V	.
18.583	25.3200	12.17	.	Q	.	.	.	.	V	.
18.667	25.4009	11.75	.	Q	.	.	.	.	V	.
18.750	25.4795	11.40	.	Q	.	.	.	.	V	.
18.833	25.5560	11.11	.	Q	.	.	.	.	V	.
18.917	25.6309	10.87	.	Q	.	.	.	.	V	.
19.000	25.7041	10.64	.	Q	.	.	.	.	V	.
19.083	25.7758	10.41	.	Q	.	.	.	.	V	.
19.167	25.8461	10.20	.	Q	.	.	.	.	V	.
19.250	25.9151	10.02	.	Q	.	.	.	.	V	.
19.333	25.9828	9.84	.	Q	.	.	.	.	V	.
19.417	26.0494	9.67	.	Q	.	.	.	.	V	.
19.500	26.1149	9.50	.	Q	.	.	.	.	V	.
19.583	26.1792	9.35	.	Q	.	.	.	.	V	.
19.667	26.2426	9.20	.	Q	.	.	.	.	V	.
19.750	26.3049	9.05	.	Q	.	.	.	.	V	.
19.833	26.3663	8.91	.	Q	.	.	.	.	V	.
19.917	26.4268	8.78	.	Q	.	.	.	.	V	.
20.000	26.4864	8.65	.	Q	.	.	.	.	V	.
20.083	26.5451	8.53	.	Q	.	.	.	.	V	.
20.167	26.6031	8.41	.	Q	.	.	.	.	V	.
20.250	26.6602	8.30	.	Q	.	.	.	.	V	.
20.333	26.7166	8.19	.	Q	.	.	.	.	V	.
20.417	26.7723	8.08	.	Q	.	.	.	.	V	.
20.500	26.8272	7.98	.	Q	.	.	.	.	V	.
20.583	26.8815	7.88	.	Q	.	.	.	.	V	.
20.667	26.9351	7.78	.	Q	.	.	.	.	V	.
20.750	26.9881	7.69	.	Q	.	.	.	.	V	.
20.833	27.0404	7.60	.	Q	.	.	.	.	V	.
20.917	27.0922	7.51	.	Q	.	.	.	.	V	.
21.000	27.1433	7.43	.	Q	.	.	.	.	V	.
21.083	27.1939	7.35	.	Q	.	.	.	.	V	.
21.167	27.2440	7.26	.	Q	.	.	.	.	V	.
21.250	27.2935	7.19	.	Q	.	.	.	.	V	.
21.333	27.3424	7.11	.	Q	.	.	.	.	V	.
21.417	27.3909	7.04	.	Q	.	.	.	.	V	.
21.500	27.4389	6.97	.	Q	.	.	.	.	V	.
21.583	27.4864	6.90	.	Q	.	.	.	.	V	.
21.667	27.5334	6.83	.	Q	.	.	.	.	V	.
21.750	27.5799	6.76	.	Q	.	.	.	.	V	.
21.833	27.6261	6.70	.	Q	.	.	.	.	V	.
21.917	27.6718	6.63	.	Q	.	.	.	.	V	.
22.000	27.7170	6.57	.	Q	.	.	.	.	V	.
22.083	27.7619	6.51	.	Q	.	.	.	.	V	.
22.167	27.8063	6.45	.	Q	.	.	.	.	V	.
22.250	27.8504	6.40	.	Q	.	.	.	.	V	.
22.333	27.8940	6.34	.	Q	.	.	.	.	V	.
22.417	27.9373	6.29	.	Q	.	.	.	.	V	.
22.500	27.9802	6.23	.	Q	.	.	.	.	V	.
22.583	28.0228	6.18	.	Q	.	.	.	.	V	.
22.667	28.0650	6.13	.	Q	.	.	.	.	V	.
22.750	28.1068	6.08	.	Q	.	.	.	.	V	.
22.833	28.1484	6.03	.	Q	.	.	.	.	V	.
22.917	28.1896	5.98	.	Q	.	.	.	.	V	.
23.000	28.2304	5.93	.	Q	.	.	.	.	V	.
23.083	28.2710	5.89	.	Q	.	.	.	.	V	.
23.167	28.3112	5.84	.	Q	.	.	.	.	V	.
23.250	28.3512	5.80	.	Q	.	.	.	.	V	.

23.333	28.3908	5.76	.Q	.	.	.	V.
23.417	28.4301	5.71	.Q	.	.	.	V.
23.500	28.4692	5.67	.Q	.	.	.	V.
23.583	28.5080	5.63	.Q	.	.	.	V.
23.667	28.5465	5.59	.Q	.	.	.	V.
23.750	28.5847	5.55	.Q	.	.	.	V.
23.833	28.6227	5.51	.Q	.	.	.	V.
23.917	28.6604	5.47	.Q	.	.	.	V.
24.000	28.6978	5.44	.Q	.	.	.	V.
24.083	28.7344	5.32	.Q	.	.	.	V.
24.167	28.7686	4.96	Q	.	.	.	V.
24.250	28.7977	4.21	Q	.	.	.	V.
24.333	28.8199	3.23	Q	.	.	.	V.
24.417	28.8343	2.09	Q	.	.	.	V.
24.500	28.8426	1.20	Q	.	.	.	V.
24.583	28.8471	0.66	Q	.	.	.	V.
24.667	28.8497	0.36	Q	.	.	.	V.
24.750	28.8510	0.19	Q	.	.	.	V.
24.833	28.8517	0.10	Q	.	.	.	V.
24.917	28.8522	0.08	Q	.	.	.	V.
25.000	28.8526	0.05	Q	.	.	.	V.
25.083	28.8527	0.02	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1505.0
10%	270.0
20%	95.0
30%	45.0
40%	35.0
50%	30.0
60%	20.0
70%	20.0
80%	20.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #3)

WATERSHED AREA = 117.200 ACRES
 BASEFLOW = 0.000 CFS/SQUARE-MILE
 *USER ENTERED "LAG" TIME = 0.649 HOURS
 VALLEY(DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.566
 LOW LOSS FRACTION = 0.779
 HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.13
 SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 0.28
 SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 0.37
 SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 0.62
 SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 0.85
 SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 1.44

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
 30-MINUTE FACTOR = 0.942
 1-HOUR FACTOR = 0.942
 3-HOUR FACTOR = 0.991
 6-HOUR FACTOR = 0.996
 24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
 UNIT INTERVAL PERCENTAGE OF LAG-TIME = 12.840

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	0.734	10.400
2	2.357	23.002
3	5.097	38.842
4	10.570	77.567
5	17.830	102.903
6	25.914	114.592
7	35.058	129.605
8	46.108	156.617
9	56.790	151.409
10	67.181	147.282
11	75.345	115.705
12	81.444	86.452
13	86.470	71.231
14	89.870	48.192
15	92.549	37.983
16	94.667	30.010
17	96.154	21.088
18	97.193	14.716
19	98.013	11.626
20	98.288	3.907
21	98.529	3.413
22	98.770	3.414
23	99.011	3.411
24	99.251	3.411
25	99.492	3.411
26	99.733	3.411
27	99.973	3.411
28	100.000	0.379

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 10.4561
 TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 3.5696

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	5.0	10.0	15.0	20.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0001	0.01	Q	.	.	.	.
0.250	0.0003	0.03	Q	.	.	.	.
0.333	0.0008	0.06	Q	.	.	.	.
0.417	0.0015	0.11	Q	.	.	.	.
0.500	0.0026	0.16	Q	.	.	.	.
0.583	0.0040	0.21	Q	.	.	.	.
0.667	0.0059	0.28	Q	.	.	.	.
0.750	0.0083	0.34	Q	.	.	.	.
0.833	0.0111	0.40	Q	.	.	.	.
0.917	0.0142	0.45	Q	.	.	.	.
1.000	0.0176	0.49	Q	.	.	.	.
1.083	0.0212	0.52	VQ	.	.	.	.
1.167	0.0250	0.55	VQ	.	.	.	.
1.250	0.0288	0.56	VQ	.	.	.	.
1.333	0.0328	0.58	VQ	.	.	.	.
1.417	0.0369	0.59	VQ	.	.	.	.
1.500	0.0410	0.60	VQ	.	.	.	.
1.583	0.0452	0.60	VQ	.	.	.	.
1.667	0.0493	0.61	VQ	.	.	.	.
1.750	0.0536	0.61	VQ	.	.	.	.
1.833	0.0578	0.62	VQ	.	.	.	.
1.917	0.0621	0.62	VQ	.	.	.	.
2.000	0.0663	0.62	VQ	.	.	.	.
2.083	0.0707	0.63	VQ	.	.	.	.
2.167	0.0750	0.63	VQ	.	.	.	.
2.250	0.0793	0.63	VQ	.	.	.	.
2.333	0.0837	0.64	VQ	.	.	.	.
2.417	0.0881	0.64	VQ	.	.	.	.
2.500	0.0925	0.64	.Q	.	.	.	.
2.583	0.0970	0.64	.Q	.	.	.	.
2.667	0.1014	0.64	.Q	.	.	.	.
2.750	0.1059	0.65	.Q	.	.	.	.
2.833	0.1103	0.65	.Q	.	.	.	.
2.917	0.1148	0.65	.Q	.	.	.	.
3.000	0.1193	0.65	.Q	.	.	.	.
3.083	0.1238	0.66	.Q	.	.	.	.
3.167	0.1284	0.66	.Q	.	.	.	.
3.250	0.1329	0.66	.Q	.	.	.	.
3.333	0.1375	0.66	.Q	.	.	.	.
3.417	0.1421	0.67	.Q	.	.	.	.
3.500	0.1467	0.67	.Q	.	.	.	.
3.583	0.1514	0.67	.Q	.	.	.	.
3.667	0.1560	0.67	.Q	.	.	.	.
3.750	0.1607	0.68	.Q	.	.	.	.
3.833	0.1654	0.68	.Q	.	.	.	.
3.917	0.1701	0.68	.Q	.	.	.	.

4.000	0.1748	0.69	.Q	.	.	.	.
4.083	0.1795	0.69	.QV	.	.	.	.
4.167	0.1843	0.69	.QV	.	.	.	.
4.250	0.1891	0.69	.QV	.	.	.	.
4.333	0.1939	0.70	.QV	.	.	.	.
4.417	0.1987	0.70	.QV	.	.	.	.
4.500	0.2035	0.70	.QV	.	.	.	.
4.583	0.2084	0.71	.QV	.	.	.	.
4.667	0.2133	0.71	.QV	.	.	.	.
4.750	0.2182	0.71	.QV	.	.	.	.
4.833	0.2231	0.72	.QV	.	.	.	.
4.917	0.2281	0.72	.QV	.	.	.	.
5.000	0.2330	0.72	.QV	.	.	.	.
5.083	0.2380	0.72	.QV	.	.	.	.
5.167	0.2430	0.73	.QV	.	.	.	.
5.250	0.2481	0.73	.QV	.	.	.	.
5.333	0.2531	0.73	.QV	.	.	.	.
5.417	0.2582	0.74	.QV	.	.	.	.
5.500	0.2633	0.74	.QV	.	.	.	.
5.583	0.2684	0.74	.Q V	.	.	.	.
5.667	0.2736	0.75	.Q V	.	.	.	.
5.750	0.2788	0.75	.Q V	.	.	.	.
5.833	0.2840	0.75	.Q V	.	.	.	.
5.917	0.2892	0.76	.Q V	.	.	.	.
6.000	0.2944	0.76	.Q V	.	.	.	.
6.083	0.2997	0.77	.Q V	.	.	.	.
6.167	0.3050	0.77	.Q V	.	.	.	.
6.250	0.3103	0.77	.Q V	.	.	.	.
6.333	0.3157	0.78	.Q V	.	.	.	.
6.417	0.3211	0.78	.Q V	.	.	.	.
6.500	0.3265	0.78	.Q V	.	.	.	.
6.583	0.3319	0.79	.Q V	.	.	.	.
6.667	0.3374	0.79	.Q V	.	.	.	.
6.750	0.3429	0.80	.Q V	.	.	.	.
6.833	0.3484	0.80	.Q V	.	.	.	.
6.917	0.3539	0.81	.Q V	.	.	.	.
7.000	0.3595	0.81	.Q V	.	.	.	.
7.083	0.3651	0.81	.Q V	.	.	.	.
7.167	0.3707	0.82	.Q V	.	.	.	.
7.250	0.3764	0.82	.Q V	.	.	.	.
7.333	0.3821	0.83	.Q V	.	.	.	.
7.417	0.3878	0.83	.Q V	.	.	.	.
7.500	0.3936	0.84	.Q V	.	.	.	.
7.583	0.3994	0.84	.Q V	.	.	.	.
7.667	0.4052	0.85	.Q V	.	.	.	.
7.750	0.4111	0.85	.Q V	.	.	.	.
7.833	0.4170	0.86	.Q V	.	.	.	.
7.917	0.4229	0.86	.Q V	.	.	.	.
8.000	0.4289	0.87	.Q V	.	.	.	.
8.083	0.4349	0.87	.Q V	.	.	.	.
8.167	0.4409	0.88	.Q V	.	.	.	.
8.250	0.4470	0.88	.Q V	.	.	.	.
8.333	0.4531	0.89	.Q V	.	.	.	.
8.417	0.4592	0.89	.Q V	.	.	.	.
8.500	0.4654	0.90	.Q V	.	.	.	.
8.583	0.4716	0.90	.Q V	.	.	.	.
8.667	0.4779	0.91	.Q V	.	.	.	.
8.750	0.4842	0.92	.Q V	.	.	.	.

8.833	0.4905	0.92	.Q V	.	.	.	.
8.917	0.4969	0.93	.Q V	.	.	.	.
9.000	0.5033	0.93	.Q V	.	.	.	.
9.083	0.5098	0.94	.Q V	.	.	.	.
9.167	0.5163	0.95	.Q V	.	.	.	.
9.250	0.5229	0.95	.Q V	.	.	.	.
9.333	0.5295	0.96	.Q V	.	.	.	.
9.417	0.5361	0.97	.Q V	.	.	.	.
9.500	0.5428	0.97	.Q V	.	.	.	.
9.583	0.5496	0.98	.Q V	.	.	.	.
9.667	0.5564	0.99	.Q V	.	.	.	.
9.750	0.5632	0.99	.Q V	.	.	.	.
9.833	0.5701	1.00	. Q V	.	.	.	.
9.917	0.5771	1.01	. Q V	.	.	.	.
10.000	0.5841	1.02	. Q V	.	.	.	.
10.083	0.5911	1.02	. Q V	.	.	.	.
10.167	0.5983	1.03	. Q V	.	.	.	.
10.250	0.6054	1.04	. Q V	.	.	.	.
10.333	0.6127	1.05	. Q V	.	.	.	.
10.417	0.6199	1.06	. Q V	.	.	.	.
10.500	0.6273	1.07	. Q V	.	.	.	.
10.583	0.6347	1.08	. Q V	.	.	.	.
10.667	0.6422	1.08	. Q V	.	.	.	.
10.750	0.6497	1.09	. Q V	.	.	.	.
10.833	0.6573	1.10	. Q V	.	.	.	.
10.917	0.6650	1.11	. Q V	.	.	.	.
11.000	0.6727	1.12	. Q V	.	.	.	.
11.083	0.6805	1.13	. Q V	.	.	.	.
11.167	0.6884	1.14	. Q V	.	.	.	.
11.250	0.6963	1.15	. Q V	.	.	.	.
11.333	0.7044	1.17	. Q V	.	.	.	.
11.417	0.7125	1.18	. Q V	.	.	.	.
11.500	0.7207	1.19	. Q V	.	.	.	.
11.583	0.7289	1.20	. Q V	.	.	.	.
11.667	0.7373	1.21	. Q V	.	.	.	.
11.750	0.7457	1.23	. Q V	.	.	.	.
11.833	0.7542	1.24	. Q V	.	.	.	.
11.917	0.7629	1.25	. Q V	.	.	.	.
12.000	0.7716	1.26	. Q V	.	.	.	.
12.083	0.7804	1.28	. Q V	.	.	.	.
12.167	0.7893	1.30	. Q V	.	.	.	.
12.250	0.7985	1.32	. Q V	.	.	.	.
12.333	0.8078	1.35	. Q V.	.	.	.	.
12.417	0.8174	1.39	. Q V.	.	.	.	.
12.500	0.8272	1.43	. Q V.	.	.	.	.
12.583	0.8374	1.48	. Q V.	.	.	.	.
12.667	0.8479	1.53	. Q V.	.	.	.	.
12.750	0.8588	1.58	. Q V.	.	.	.	.
12.833	0.8700	1.63	. Q V.	.	.	.	.
12.917	0.8815	1.67	. Q V.	.	.	.	.
13.000	0.8932	1.71	. Q V	.	.	.	.
13.083	0.9053	1.75	. Q V	.	.	.	.
13.167	0.9175	1.78	. Q V	.	.	.	.
13.250	0.9300	1.81	. Q V	.	.	.	.
13.333	0.9426	1.84	. Q V	.	.	.	.
13.417	0.9555	1.87	. Q V	.	.	.	.
13.500	0.9686	1.90	. Q V	.	.	.	.
13.583	0.9818	1.93	. Q .V	.	.	.	.

13.667	0.9953	1.96	.	Q	.	V	.	.	.	.
13.750	1.0090	1.99	.	Q	.	V	.	.	.	.
13.833	1.0229	2.02	.	Q	.	V	.	.	.	.
13.917	1.0370	2.05	.	Q	.	V	.	.	.	.
14.000	1.0514	2.09	.	Q	.	V	.	.	.	.
14.083	1.0660	2.12	.	Q	.	V	.	.	.	.
14.167	1.0810	2.17	.	Q	.	V	.	.	.	.
14.250	1.0962	2.22	.	Q	.	V	.	.	.	.
14.333	1.1119	2.27	.	Q	.	V	.	.	.	.
14.417	1.1280	2.34	.	Q	.	V	.	.	.	.
14.500	1.1446	2.41	.	Q	.	V	.	.	.	.
14.583	1.1617	2.48	.	Q	.	V	.	.	.	.
14.667	1.1794	2.57	.	Q	.	V	.	.	.	.
14.750	1.1977	2.66	.	Q	.	V	.	.	.	.
14.833	1.2166	2.75	.	Q	.	V	.	.	.	.
14.917	1.2361	2.84	.	Q	.	V	.	.	.	.
15.000	1.2562	2.92	.	Q	.	V	.	.	.	.
15.083	1.2770	3.01	.	Q	.	V	.	.	.	.
15.167	1.2984	3.10	.	Q	.	V	.	.	.	.
15.250	1.3204	3.20	.	Q	.	V	.	.	.	.
15.333	1.3431	3.30	.	Q	.	V	.	.	.	.
15.417	1.3666	3.41	.	Q	.	V	.	.	.	.
15.500	1.3908	3.51	.	Q	.	V	.	.	.	.
15.583	1.4157	3.62	.	Q	.	V	.	.	.	.
15.667	1.4413	3.72	.	Q	.	V	.	.	.	.
15.750	1.4677	3.82	.	Q	.	V	.	.	.	.
15.833	1.4949	3.96	.	Q	.	V	.	.	.	.
15.917	1.5235	4.14	.	Q	.	V	.	.	.	.
16.000	1.5538	4.40	.	Q	.	V	.	.	.	.
16.083	1.5914	5.46	.	Q	.	V	.	.	.	.
16.167	1.6379	6.76	.	Q	.	V	.	.	.	.
16.250	1.6956	8.38	.	Q	.	V	.	.	.	.
16.333	1.7751	11.54	.	Q	.	V	.	.	.	.
16.417	1.8693	13.68	.	Q	.	V	.	.	.	.
16.500	1.9714	14.81	.	Q	.	V	.	.	.	.
16.583	2.0819	16.05	.	Q	.	V	.	.	.	.
16.667	2.2051	17.90	.	Q	.	V	.	.	.	.
16.750	2.3247	17.36	.	Q	.	V	.	.	.	.
16.833	2.4394	16.65	.	Q	.	V	.	.	.	.
16.917	2.5358	14.00	.	Q	.	V	.	.	.	.
17.000	2.6150	11.51	.	Q	.	V	.	.	.	.
17.083	2.6838	9.99	.	Q	.	V	.	.	.	.
17.167	2.7390	8.02	.	Q	.	V	.	.	.	.
17.250	2.7869	6.95	.	Q	.	V	.	.	.	.
17.333	2.8286	6.06	.	Q	.	V	.	.	.	.
17.417	2.8641	5.15	.	Q	.	V	.	.	.	.
17.500	2.8946	4.43	.	Q	.	V	.	.	.	.
17.583	2.9220	3.97	.	Q	.	V	.	.	.	.
17.667	2.9442	3.23	.	Q	.	V	.	.	.	.
17.750	2.9650	3.02	.	Q	.	V	.	.	.	.
17.833	2.9848	2.87	.	Q	.	V	.	.	.	.
17.917	3.0038	2.75	.	Q	.	V	.	.	.	.
18.000	3.0219	2.63	.	Q	.	V	.	.	.	.
18.083	3.0393	2.52	.	Q	.	V	.	.	.	.
18.167	3.0559	2.42	.	Q	.	V	.	.	.	.
18.250	3.0719	2.32	.	Q	.	V	.	.	.	.
18.333	3.0857	2.01	.	Q	.	V	.	.	.	.
18.417	3.0987	1.89	.	Q	.	V	.	.	.	.

18.500	3.1112	1.81	.	Q	.	.	.	.	.	V	.
18.583	3.1231	1.73	.	Q	.	.	.	.	.	V	.
18.667	3.1345	1.65	.	Q	.	.	.	.	.	V	.
18.750	3.1453	1.57	.	Q	.	.	.	.	.	V	.
18.833	3.1556	1.50	.	Q	.	.	.	.	.	V	.
18.917	3.1655	1.44	.	Q	.	.	.	.	.	V	.
19.000	3.1751	1.39	.	Q	.	.	.	.	.	V	.
19.083	3.1843	1.34	.	Q	.	.	.	.	.	V	.
19.167	3.1933	1.30	.	Q	.	.	.	.	.	V	.
19.250	3.2020	1.26	.	Q	.	.	.	.	.	V	.
19.333	3.2105	1.23	.	Q	.	.	.	.	.	V	.
19.417	3.2188	1.20	.	Q	.	.	.	.	.	V	.
19.500	3.2269	1.18	.	Q	.	.	.	.	.	V	.
19.583	3.2348	1.15	.	Q	.	.	.	.	.	V	.
19.667	3.2426	1.13	.	Q	.	.	.	.	.	V	.
19.750	3.2502	1.11	.	Q	.	.	.	.	.	V	.
19.833	3.2577	1.09	.	Q	.	.	.	.	.	V	.
19.917	3.2651	1.07	.	Q	.	.	.	.	.	V	.
20.000	3.2723	1.05	.	Q	.	.	.	.	.	V	.
20.083	3.2794	1.03	.	Q	.	.	.	.	.	V	.
20.167	3.2864	1.02	.	Q	.	.	.	.	.	V	.
20.250	3.2933	1.00	.	Q	.	.	.	.	.	V	.
20.333	3.3001	0.99	.	Q	.	.	.	.	.	V	.
20.417	3.3068	0.97	.	Q	.	.	.	.	.	V	.
20.500	3.3134	0.96	.	Q	.	.	.	.	.	V	.
20.583	3.3199	0.95	.	Q	.	.	.	.	.	V	.
20.667	3.3263	0.93	.	Q	.	.	.	.	.	V	.
20.750	3.3327	0.92	.	Q	.	.	.	.	.	V	.
20.833	3.3389	0.91	.	Q	.	.	.	.	.	V	.
20.917	3.3451	0.90	.	Q	.	.	.	.	.	V	.
21.000	3.3512	0.89	.	Q	.	.	.	.	.	V	.
21.083	3.3572	0.88	.	Q	.	.	.	.	.	V	.
21.167	3.3632	0.86	.	Q	.	.	.	.	.	V	.
21.250	3.3691	0.85	.	Q	.	.	.	.	.	V	.
21.333	3.3749	0.84	.	Q	.	.	.	.	.	V	.
21.417	3.3806	0.84	.	Q	.	.	.	.	.	V	.
21.500	3.3863	0.83	.	Q	.	.	.	.	.	V	.
21.583	3.3920	0.82	.	Q	.	.	.	.	.	V	.
21.667	3.3975	0.81	.	Q	.	.	.	.	.	V	.
21.750	3.4030	0.80	.	Q	.	.	.	.	.	V	.
21.833	3.4085	0.79	.	Q	.	.	.	.	.	V	.
21.917	3.4139	0.78	.	Q	.	.	.	.	.	V	.
22.000	3.4192	0.78	.	Q	.	.	.	.	.	V	.
22.083	3.4245	0.77	.	Q	.	.	.	.	.	V	.
22.167	3.4298	0.76	.	Q	.	.	.	.	.	V	.
22.250	3.4350	0.75	.	Q	.	.	.	.	.	V	.
22.333	3.4401	0.75	.	Q	.	.	.	.	.	V	.
22.417	3.4452	0.74	.	Q	.	.	.	.	.	V	.
22.500	3.4502	0.73	.	Q	.	.	.	.	.	V	.
22.583	3.4552	0.73	.	Q	.	.	.	.	.	V	.
22.667	3.4602	0.72	.	Q	.	.	.	.	.	V	.
22.750	3.4651	0.71	.	Q	.	.	.	.	.	V	.
22.833	3.4700	0.71	.	Q	.	.	.	.	.	V	.
22.917	3.4748	0.70	.	Q	.	.	.	.	.	V	.
23.000	3.4796	0.70	.	Q	.	.	.	.	.	V	.
23.083	3.4844	0.69	.	Q	.	.	.	.	.	V	.
23.167	3.4891	0.68	.	Q	.	.	.	.	.	V	.
23.250	3.4938	0.68	.	Q	.	.	.	.	.	V	.

```

23.333  3.4984  0.67  .Q  .  .  .  V.
23.417  3.5030  0.67  .Q  .  .  .  V.
23.500  3.5076  0.66  .Q  .  .  .  V.
23.583  3.5121  0.66  .Q  .  .  .  V.
23.667  3.5166  0.65  .Q  .  .  .  V.
23.750  3.5211  0.65  .Q  .  .  .  V.
23.833  3.5255  0.64  .Q  .  .  .  V.
23.917  3.5299  0.64  .Q  .  .  .  V.
24.000  3.5343  0.63  .Q  .  .  .  V.
24.083  3.5386  0.63  .Q  .  .  .  V.
24.167  3.5428  0.61  .Q  .  .  .  V.
24.250  3.5469  0.59  .Q  .  .  .  V.
24.333  3.5507  0.55  .Q  .  .  .  V.
24.417  3.5542  0.51  .Q  .  .  .  V.
24.500  3.5574  0.46  Q  .  .  .  V.
24.583  3.5601  0.40  Q  .  .  .  V.
24.667  3.5624  0.33  Q  .  .  .  V.
24.750  3.5642  0.26  Q  .  .  .  V.
24.833  3.5656  0.20  Q  .  .  .  V.
24.917  3.5666  0.15  Q  .  .  .  V.
25.000  3.5674  0.11  Q  .  .  .  V.
25.083  3.5680  0.08  Q  .  .  .  V.
25.167  3.5684  0.06  Q  .  .  .  V.
25.250  3.5687  0.05  Q  .  .  .  V.
25.333  3.5689  0.03  Q  .  .  .  V.
25.417  3.5691  0.02  Q  .  .  .  V.
25.500  3.5692  0.02  Q  .  .  .  V.
25.583  3.5693  0.01  Q  .  .  .  V.
25.667  3.5694  0.01  Q  .  .  .  V.
25.750  3.5694  0.01  Q  .  .  .  V.

```

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1545.0
10%	320.0
20%	125.0
30%	80.0
40%	60.0
50%	50.0
60%	45.0
70%	35.0
80%	25.0
90%	15.0

```

*****
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7
-----
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<
=====

```

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

```

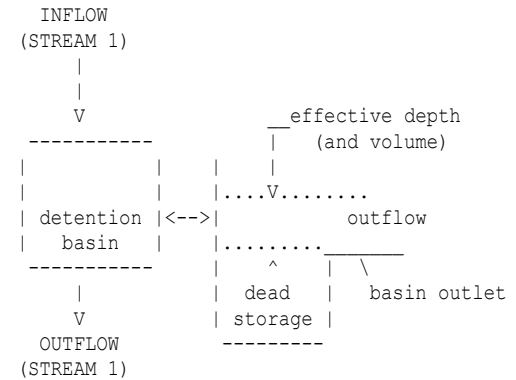
-----
>>>>STREAM NUMBER 2 ADDED TO STREAM NUMBER 1<<<<<
=====

```

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*****
FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1
-----
>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<
=====

```



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

```

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

```

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.01	2.000
3	2.00	0.02	6.000
4	3.00	0.03	13.000
5	4.00	0.04	21.000
6	5.00	0.05	30.000
7	6.00	0.07	41.000
8	7.00	62.00	53.000
9	8.00	279.00	66.000
10	9.00	623.00	79.000
11	10.00	930.00	92.000
12	11.00	1083.00	105.000
13	12.00	1210.00	119.000
14	13.00	1319.00	133.000
15	14.00	1415.00	148.000

16	15.00	1504.00	162.000
17	16.00	1799.00	177.000
18	17.00	2767.00	193.000
19	18.00	4110.00	208.000
20	19.00	5737.00	224.000

=====

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	MEAN		
				EFFECTIVE DEPTH(FT)	OUTFLOW (CFS)	EFFECTIVE VOLUME(AF)
0.083	0.000	0.21	0.00	0.00	0.0	0.001
0.167	0.000	0.99	0.00	0.00	0.0	0.008
0.250	0.000	2.81	0.00	0.01	0.0	0.028
0.333	0.000	5.23	0.00	0.03	0.0	0.064
0.417	0.000	8.21	0.00	0.06	0.0	0.120
0.500	0.000	10.90	0.00	0.10	0.0	0.195
0.583	0.000	12.72	0.00	0.14	0.0	0.283
0.667	0.000	13.88	0.00	0.19	0.0	0.378
0.750	0.000	14.61	0.00	0.24	0.0	0.479
0.833	0.000	15.08	0.00	0.29	0.0	0.583
0.917	0.000	15.36	0.00	0.34	0.0	0.689
1.000	0.000	15.52	0.00	0.40	0.0	0.796
1.083	0.000	15.67	0.00	0.45	0.0	0.903
1.167	0.000	15.81	0.00	0.51	0.0	1.012
1.250	0.000	15.92	0.00	0.56	0.0	1.122
1.333	0.000	16.01	0.00	0.62	0.0	1.232
1.417	0.000	16.08	0.00	0.67	0.0	1.343
1.500	0.000	16.14	0.00	0.73	0.0	1.454
1.583	0.000	16.20	0.00	0.78	0.0	1.565
1.667	0.000	16.26	0.00	0.84	0.0	1.677
1.750	0.000	16.32	0.00	0.89	0.0	1.790
1.833	0.000	16.37	0.00	0.95	0.0	1.902
1.917	0.000	16.43	0.00	1.00	0.0	2.015
2.000	0.000	16.49	0.00	1.03	0.0	2.129
2.083	0.000	16.55	0.00	1.06	0.0	2.243
2.167	0.000	16.62	0.00	1.09	0.0	2.357
2.250	0.000	16.68	0.00	1.12	0.0	2.472
2.333	0.000	16.74	0.00	1.15	0.0	2.587
2.417	0.000	16.80	0.00	1.18	0.0	2.703
2.500	0.000	16.86	0.00	1.20	0.0	2.819
2.583	0.000	16.92	0.00	1.23	0.0	2.935
2.667	0.000	16.99	0.00	1.26	0.0	3.052
2.750	0.000	17.05	0.00	1.29	0.0	3.169
2.833	0.000	17.12	0.00	1.32	0.0	3.287
2.917	0.000	17.18	0.00	1.35	0.0	3.405
3.000	0.000	17.25	0.00	1.38	0.0	3.524
3.083	0.000	17.31	0.00	1.41	0.0	3.643
3.167	0.000	17.38	0.00	1.44	0.0	3.763
3.250	0.000	17.45	0.00	1.47	0.0	3.883
3.333	0.000	17.52	0.00	1.50	0.0	4.003
3.417	0.000	17.59	0.00	1.53	0.0	4.124
3.500	0.000	17.66	0.00	1.56	0.0	4.246

3.583	0.000	17.73	0.00	1.59	0.0	4.368
3.667	0.000	17.80	0.00	1.62	0.0	4.490
3.750	0.000	17.87	0.00	1.65	0.0	4.613
3.833	0.000	17.94	0.00	1.68	0.0	4.737
3.917	0.000	18.02	0.00	1.72	0.0	4.861
4.000	0.000	18.09	0.00	1.75	0.0	4.985
4.083	0.000	18.17	0.00	1.78	0.0	5.110
4.167	0.000	18.24	0.00	1.81	0.0	5.236
4.250	0.000	18.32	0.00	1.84	0.0	5.362
4.333	0.000	18.40	0.00	1.87	0.0	5.488
4.417	0.000	18.48	0.00	1.90	0.0	5.615
4.500	0.000	18.55	0.00	1.94	0.0	5.743
4.583	0.000	18.64	0.00	1.97	0.0	5.871
4.667	0.000	18.72	0.00	2.00	0.0	6.000
4.750	0.000	18.80	0.00	2.02	0.0	6.129
4.833	0.000	18.88	0.00	2.04	0.0	6.259
4.917	0.000	18.97	0.00	2.06	0.0	6.389
5.000	0.000	19.05	0.00	2.07	0.0	6.521
5.083	0.000	19.14	0.00	2.09	0.0	6.652
5.167	0.000	19.23	0.00	2.11	0.0	6.784
5.250	0.000	19.31	0.00	2.13	0.0	6.917
5.333	0.000	19.40	0.00	2.15	0.0	7.051
5.417	0.000	19.49	0.00	2.17	0.0	7.185
5.500	0.000	19.58	0.00	2.19	0.0	7.320
5.583	0.000	19.68	0.00	2.21	0.0	7.455
5.667	0.000	19.77	0.00	2.23	0.0	7.591
5.750	0.000	19.87	0.00	2.25	0.0	7.728
5.833	0.000	19.96	0.00	2.27	0.0	7.865
5.917	0.000	20.06	0.00	2.29	0.0	8.003
6.000	0.000	20.16	0.00	2.31	0.0	8.142
6.083	0.000	20.26	0.00	2.33	0.0	8.281
6.167	0.000	20.36	0.00	2.35	0.0	8.421
6.250	0.000	20.46	0.00	2.37	0.0	8.562
6.333	0.000	20.57	0.00	2.39	0.0	8.703
6.417	0.000	20.67	0.00	2.41	0.0	8.845
6.500	0.000	20.78	0.00	2.43	0.0	8.988
6.583	0.000	20.89	0.00	2.45	0.0	9.132
6.667	0.000	21.00	0.00	2.47	0.0	9.276
6.750	0.000	21.11	0.00	2.49	0.0	9.422
6.833	0.000	21.22	0.00	2.51	0.0	9.568
6.917	0.000	21.34	0.00	2.53	0.0	9.714
7.000	0.000	21.45	0.00	2.55	0.0	9.862
7.083	0.000	21.57	0.00	2.57	0.0	10.010
7.167	0.000	21.69	0.00	2.59	0.0	10.159
7.250	0.000	21.81	0.00	2.62	0.0	10.309
7.333	0.000	21.93	0.00	2.64	0.0	10.460
7.417	0.000	22.06	0.00	2.66	0.0	10.612
7.500	0.000	22.19	0.00	2.68	0.0	10.765
7.583	0.000	22.32	0.00	2.70	0.0	10.918
7.667	0.000	22.45	0.00	2.72	0.0	11.072
7.750	0.000	22.58	0.00	2.75	0.0	11.228
7.833	0.000	22.71	0.00	2.77	0.0	11.384
7.917	0.000	22.85	0.00	2.79	0.0	11.541
8.000	0.000	22.99	0.00	2.81	0.0	11.699
8.083	0.000	23.13	0.00	2.84	0.0	11.858
8.167	0.000	23.27	0.00	2.86	0.0	12.018
8.250	0.000	23.42	0.00	2.88	0.0	12.179
8.333	0.000	23.57	0.00	2.91	0.0	12.342

8.417	0.000	23.72	0.00	2.93	0.0	12.505
8.500	0.000	23.87	0.00	2.95	0.0	12.669
8.583	0.000	24.03	0.00	2.98	0.0	12.834
8.667	0.000	24.19	0.00	3.00	0.0	13.001
8.750	0.000	24.35	0.00	3.02	0.0	13.168
8.833	0.000	24.51	0.00	3.04	0.0	13.337
8.917	0.000	24.68	0.00	3.06	0.0	13.506
9.000	0.000	24.85	0.00	3.08	0.0	13.677
9.083	0.000	25.03	0.00	3.11	0.0	13.849
9.167	0.000	25.20	0.00	3.13	0.0	14.023
9.250	0.000	25.38	0.00	3.15	0.0	14.197
9.333	0.000	25.56	0.00	3.17	0.0	14.373
9.417	0.000	25.75	0.00	3.19	0.0	14.550
9.500	0.000	25.94	0.00	3.22	0.0	14.729
9.583	0.000	26.14	0.00	3.24	0.0	14.908
9.667	0.000	26.33	0.00	3.26	0.0	15.090
9.750	0.000	26.54	0.00	3.28	0.0	15.272
9.833	0.000	26.74	0.00	3.31	0.0	15.456
9.917	0.000	26.95	0.00	3.33	0.0	15.641
10.000	0.000	27.17	0.00	3.35	0.0	15.828
10.083	0.000	27.39	0.00	3.38	0.0	16.017
10.167	0.000	27.61	0.00	3.40	0.0	16.207
10.250	0.000	27.84	0.00	3.42	0.0	16.398
10.333	0.000	28.08	0.00	3.45	0.0	16.591
10.417	0.000	28.32	0.00	3.47	0.0	16.786
10.500	0.000	28.56	0.00	3.50	0.0	16.982
10.583	0.000	28.81	0.00	3.52	0.0	17.180
10.667	0.000	29.07	0.00	3.55	0.0	17.380
10.750	0.000	29.33	0.00	3.57	0.0	17.582
10.833	0.000	29.60	0.00	3.60	0.0	17.786
10.917	0.000	29.87	0.00	3.62	0.0	17.991
11.000	0.000	30.15	0.00	3.65	0.0	18.199
11.083	0.000	30.44	0.00	3.68	0.0	18.408
11.167	0.000	30.74	0.00	3.70	0.0	18.619
11.250	0.000	31.04	0.00	3.73	0.0	18.833
11.333	0.000	31.35	0.00	3.76	0.0	19.049
11.417	0.000	31.68	0.00	3.78	0.0	19.266
11.500	0.000	32.00	0.00	3.81	0.0	19.487
11.583	0.000	32.34	0.00	3.84	0.0	19.709
11.667	0.000	32.69	0.00	3.87	0.0	19.934
11.750	0.000	33.05	0.00	3.90	0.0	20.161
11.833	0.000	33.42	0.00	3.92	0.0	20.391
11.917	0.000	33.80	0.00	3.95	0.0	20.623
12.000	0.000	34.19	0.00	3.98	0.0	20.859
12.083	0.000	34.70	0.00	4.01	0.0	21.097
12.167	0.000	35.49	0.00	4.04	0.0	21.341
12.250	0.000	36.82	0.00	4.07	0.0	21.595
12.333	0.000	38.46	0.00	4.10	0.0	21.859
12.417	0.000	40.39	0.00	4.13	0.0	22.137
12.500	0.000	42.19	0.00	4.16	0.0	22.427
12.583	0.000	43.58	0.00	4.19	0.0	22.727
12.667	0.000	44.66	0.00	4.23	0.0	23.034
12.750	0.000	45.55	0.00	4.26	0.0	23.348
12.833	0.000	46.32	0.00	4.30	0.0	23.667
12.917	0.000	47.03	0.00	4.33	0.0	23.990
13.000	0.000	47.69	0.00	4.37	0.0	24.318
13.083	0.000	48.38	0.00	4.41	0.0	24.651
13.167	0.000	49.08	0.00	4.44	0.0	24.989

13.250	0.000	49.80	0.00	4.48	0.0	25.331
13.333	0.000	50.52	0.00	4.52	0.0	25.679
13.417	0.000	51.28	0.00	4.56	0.0	26.032
13.500	0.000	52.06	0.00	4.60	0.1	26.390
13.583	0.000	52.88	0.00	4.64	0.1	26.754
13.667	0.000	53.73	0.00	4.68	0.1	27.123
13.750	0.000	54.62	0.00	4.72	0.1	27.499
13.833	0.000	55.55	0.00	4.76	0.1	27.882
13.917	0.000	56.54	0.00	4.81	0.1	28.271
14.000	0.000	57.57	0.00	4.85	0.1	28.667
14.083	0.000	58.77	0.00	4.90	0.1	29.071
14.167	0.000	60.30	0.00	4.94	0.1	29.486
14.250	0.000	62.42	0.00	4.99	0.1	29.916
14.333	0.000	64.89	0.00	5.03	0.1	30.362
14.417	0.000	67.72	0.00	5.08	0.1	30.828
14.500	0.000	70.49	0.00	5.12	0.1	31.313
14.583	0.000	72.94	0.00	5.17	0.1	31.815
14.667	0.000	75.16	0.00	5.21	0.1	32.332
14.750	0.000	77.31	0.00	5.26	0.1	32.864
14.833	0.000	79.45	0.00	5.31	0.1	33.411
14.917	0.000	81.69	0.00	5.36	0.1	33.973
15.000	0.000	84.02	0.00	5.41	0.1	34.552
15.083	0.000	86.59	0.00	5.47	0.1	35.148
15.167	0.000	89.36	0.00	5.52	0.1	35.763
15.250	0.000	92.46	0.00	5.58	0.1	36.399
15.333	0.000	95.85	0.00	5.64	0.1	37.059
15.417	0.000	99.34	0.00	5.70	0.1	37.742
15.500	0.000	102.31	0.00	5.77	0.1	38.447
15.583	0.000	104.22	0.00	5.83	0.1	39.164
15.667	0.000	105.85	0.00	5.90	0.1	39.893
15.750	0.000	107.96	0.00	5.97	0.1	40.636
15.833	0.000	112.56	0.00	6.03	1.1	41.403
15.917	0.000	122.46	0.00	6.10	4.2	42.217
16.000	0.000	139.23	0.00	6.18	8.7	43.116
16.083	0.000	182.07	0.00	6.27	14.0	44.274
16.167	0.000	258.66	0.00	6.41	21.2	45.910
16.250	0.000	367.76	0.00	6.60	31.4	48.226
16.333	0.000	431.44	0.00	6.82	44.2	50.893
16.417	0.000	470.38	0.00	7.05	62.4	53.703
16.500	0.000	423.65	0.00	7.23	92.7	55.981
16.583	0.000	326.78	0.00	7.34	123.5	57.382
16.667	0.000	249.50	0.00	7.39	141.4	58.127
16.750	0.000	196.06	0.00	7.42	150.2	58.442
16.833	0.000	160.59	0.00	7.42	153.3	58.493
16.917	0.000	132.80	0.00	7.41	152.6	58.357
17.000	0.000	114.15	0.00	7.39	149.4	58.114
17.083	0.000	105.21	0.00	7.37	145.1	57.839
17.167	0.000	97.26	0.00	7.35	140.3	57.543
17.250	0.000	88.10	0.00	7.32	135.1	57.219
17.333	0.000	80.14	0.00	7.30	129.6	56.879
17.417	0.000	73.12	0.00	7.27	123.8	56.529
17.500	0.000	67.58	0.00	7.24	118.0	56.182
17.583	0.000	63.65	0.00	7.22	112.3	55.847
17.667	0.000	60.10	0.00	7.19	106.8	55.525
17.750	0.000	57.53	0.00	7.17	101.6	55.221
17.833	0.000	55.35	0.00	7.15	96.7	54.937
17.917	0.000	53.45	0.00	7.13	92.1	54.670
18.000	0.000	51.77	0.00	7.11	87.8	54.422

18.083	0.000	50.13	0.00	7.09	83.8	54.190
18.167	0.000	48.32	0.00	7.07	80.0	53.972
18.250	0.000	46.12	0.00	7.06	76.5	53.763
18.333	0.000	43.53	0.00	7.04	73.0	53.560
18.417	0.000	40.96	0.00	7.03	69.7	53.362
18.500	0.000	38.64	0.00	7.01	66.4	53.170
18.583	0.000	36.84	0.00	7.00	63.4	52.987
18.667	0.000	35.43	0.00	6.98	61.5	52.808
18.750	0.000	34.29	0.00	6.97	60.5	52.627
18.833	0.000	33.32	0.00	6.95	59.6	52.446
18.917	0.000	32.50	0.00	6.94	58.7	52.266
19.000	0.000	31.77	0.00	6.92	57.7	52.087
19.083	0.000	31.09	0.00	6.91	56.8	51.910
19.167	0.000	30.45	0.00	6.89	55.9	51.734
19.250	0.000	29.85	0.00	6.88	55.0	51.561
19.333	0.000	29.29	0.00	6.87	54.1	51.390
19.417	0.000	28.76	0.00	6.85	53.3	51.221
19.500	0.000	28.27	0.00	6.84	52.4	51.055
19.583	0.000	27.79	0.00	6.82	51.5	50.891
19.667	0.000	27.34	0.00	6.81	50.7	50.731
19.750	0.000	26.90	0.00	6.80	49.9	50.572
19.833	0.000	26.49	0.00	6.78	49.1	50.417
19.917	0.000	26.09	0.00	6.77	48.3	50.264
20.000	0.000	25.70	0.00	6.76	47.5	50.114
20.083	0.000	25.33	0.00	6.75	46.7	49.967
20.167	0.000	24.97	0.00	6.74	46.0	49.822
20.250	0.000	24.63	0.00	6.72	45.2	49.680
20.333	0.000	24.30	0.00	6.71	44.5	49.541
20.417	0.000	23.98	0.00	6.70	43.8	49.404
20.500	0.000	23.67	0.00	6.69	43.1	49.271
20.583	0.000	23.37	0.00	6.68	42.4	49.140
20.667	0.000	23.09	0.00	6.67	41.7	49.011
20.750	0.000	22.81	0.00	6.66	41.1	48.885
20.833	0.000	22.53	0.00	6.65	40.4	48.762
20.917	0.000	22.27	0.00	6.64	39.8	48.641
21.000	0.000	22.02	0.00	6.63	39.2	48.523
21.083	0.000	21.77	0.00	6.62	38.6	48.407
21.167	0.000	21.53	0.00	6.61	38.0	48.293
21.250	0.000	21.30	0.00	6.60	37.4	48.182
21.333	0.000	21.07	0.00	6.59	36.9	48.074
21.417	0.000	20.85	0.00	6.58	36.3	47.967
21.500	0.000	20.64	0.00	6.57	35.8	47.863
21.583	0.000	20.43	0.00	6.56	35.2	47.761
21.667	0.000	20.22	0.00	6.56	34.7	47.661
21.750	0.000	20.03	0.00	6.55	34.2	47.564
21.833	0.000	19.83	0.00	6.54	33.7	47.468
21.917	0.000	19.64	0.00	6.53	33.2	47.375
22.000	0.000	19.46	0.00	6.52	32.7	47.284
22.083	0.000	19.28	0.00	6.52	32.3	47.194
22.167	0.000	19.11	0.00	6.51	31.8	47.107
22.250	0.000	18.93	0.00	6.50	31.4	47.021
22.333	0.000	18.77	0.00	6.49	30.9	46.937
22.417	0.000	18.60	0.00	6.49	30.5	46.855
22.500	0.000	18.45	0.00	6.48	30.1	46.775
22.583	0.000	18.29	0.00	6.47	29.7	46.697
22.667	0.000	18.14	0.00	6.47	29.3	46.620
22.750	0.000	17.99	0.00	6.46	28.9	46.545
22.833	0.000	17.84	0.00	6.46	28.5	46.472

22.917	0.000	17.70	0.00	6.45	28.1	46.400
23.000	0.000	17.56	0.00	6.44	27.8	46.330
23.083	0.000	17.42	0.00	6.44	27.4	46.261
23.167	0.000	17.29	0.00	6.43	27.0	46.194
23.250	0.000	17.15	0.00	6.43	26.7	46.128
23.333	0.000	17.03	0.00	6.42	26.4	46.064
23.417	0.000	16.90	0.00	6.42	26.0	46.001
23.500	0.000	16.78	0.00	6.41	25.7	45.939
23.583	0.000	16.65	0.00	6.41	25.4	45.879
23.667	0.000	16.53	0.00	6.40	25.1	45.820
23.750	0.000	16.42	0.00	6.40	24.8	45.762
23.833	0.000	16.30	0.00	6.39	24.5	45.706
23.917	0.000	16.19	0.00	6.39	24.2	45.651
24.000	0.000	16.08	0.00	6.38	23.9	45.597
24.083	0.000	15.96	0.00	6.38	23.6	45.542
24.167	0.000	14.87	0.00	6.37	23.4	45.484
24.250	0.000	12.97	0.00	6.37	23.0	45.414
24.333	0.000	10.47	0.00	6.36	22.6	45.331
24.417	0.000	7.44	0.00	6.35	22.2	45.229
24.500	0.000	4.74	0.00	6.34	21.6	45.113
24.583	0.000	2.92	0.00	6.33	21.0	44.989
24.667	0.000	1.78	0.00	6.32	20.3	44.861
24.750	0.000	1.09	0.00	6.31	19.7	44.733
24.833	0.000	0.66	0.00	6.30	19.0	44.607
24.917	0.000	0.43	0.00	6.29	18.4	44.483
25.000	0.000	0.31	0.00	6.28	17.7	44.363
25.083	0.000	0.22	0.00	6.27	17.1	44.247
25.167	0.000	0.13	0.00	6.26	16.5	44.134
25.250	0.000	0.07	0.00	6.25	16.0	44.025
25.333	0.000	0.04	0.00	6.24	15.4	43.919
25.417	0.000	0.02	0.00	6.23	14.9	43.817
25.500	0.000	0.02	0.00	6.23	14.3	43.718
25.583	0.000	0.01	0.00	6.22	13.8	43.623
25.667	0.000	0.01	0.00	6.21	13.4	43.531
25.750	0.000	0.01	0.00	6.20	12.9	43.442
25.833	0.000	0.01	0.00	6.20	12.4	43.356
25.917	0.000	0.01	0.00	6.19	12.0	43.273
26.000	0.000	0.00	0.00	6.18	11.6	43.194
26.083	0.000	0.00	0.00	6.18	11.2	43.117
26.167	0.000	0.00	0.00	6.17	10.8	43.042
26.250	0.000	0.00	0.00	6.16	10.4	42.970
26.333	0.000	0.00	0.00	6.16	10.1	42.901
26.417	0.000	0.00	0.00	6.15	9.7	42.834
26.500	0.000	0.00	0.00	6.15	9.4	42.770
26.583	0.000	0.00	0.00	6.14	9.0	42.708
26.667	0.000	0.00	0.00	6.14	8.7	42.648
26.750	0.000	0.00	0.00	6.13	8.4	42.590
26.833	0.000	0.00	0.00	6.13	8.1	42.534
26.917	0.000	0.00	0.00	6.12	7.8	42.480
27.000	0.000	0.00	0.00	6.12	7.6	42.427
27.083	0.000	0.00	0.00	6.11	7.3	42.377
27.167	0.000	0.00	0.00	6.11	7.0	42.329
27.250	0.000	0.00	0.00	6.11	6.8	42.282
27.333	0.000	0.00	0.00	6.10	6.6	42.237
27.417	0.000	0.00	0.00	6.10	6.3	42.193
27.500	0.000	0.00	0.00	6.10	6.1	42.151
27.583	0.000	0.00	0.00	6.09	5.9	42.110
27.667	0.000	0.00	0.00	6.09	5.7	42.071

27.750	0.000	0.00	0.00	6.09	5.5	42.033
27.833	0.000	0.00	0.00	6.08	5.3	41.997
27.917	0.000	0.00	0.00	6.08	5.1	41.961
28.000	0.000	0.00	0.00	6.08	4.9	41.927
28.083	0.000	0.00	0.00	6.07	4.8	41.894
28.167	0.000	0.00	0.00	6.07	4.6	41.863
28.250	0.000	0.00	0.00	6.07	4.4	41.832
28.333	0.000	0.00	0.00	6.07	4.3	41.803
28.417	0.000	0.00	0.00	6.06	4.1	41.774
28.500	0.000	0.00	0.00	6.06	4.0	41.747
28.583	0.000	0.00	0.00	6.06	3.9	41.720
28.667	0.000	0.00	0.00	6.06	3.7	41.695
28.750	0.000	0.00	0.00	6.06	3.6	41.670
28.833	0.000	0.00	0.00	6.05	3.5	41.646
28.917	0.000	0.00	0.00	6.05	3.3	41.623
29.000	0.000	0.00	0.00	6.05	3.2	41.601
29.083	0.000	0.00	0.00	6.05	3.1	41.579
29.167	0.000	0.00	0.00	6.05	3.0	41.559
29.250	0.000	0.00	0.00	6.04	2.9	41.539
29.333	0.000	0.00	0.00	6.04	2.8	41.519
29.417	0.000	0.00	0.00	6.04	2.7	41.501
29.500	0.000	0.00	0.00	6.04	2.6	41.483
29.583	0.000	0.00	0.00	6.04	2.5	41.466
29.667	0.000	0.00	0.00	6.04	2.4	41.449
29.750	0.000	0.00	0.00	6.04	2.3	41.433
29.833	0.000	0.00	0.00	6.03	2.3	41.417
29.917	0.000	0.00	0.00	6.03	2.2	41.402

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 84.590 AF
BASIN STORAGE = 36.757 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 47.822 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
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STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	50.0	100.0	150.0	200.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0000	0.00	Q	.	.	.	.
0.417	0.0000	0.00	Q	.	.	.	.
0.500	0.0000	0.00	Q	.	.	.	.
0.583	0.0000	0.00	Q	.	.	.	.
0.667	0.0000	0.00	Q	.	.	.	.
0.750	0.0000	0.00	Q	.	.	.	.
0.833	0.0001	0.00	Q	.	.	.	.
0.917	0.0001	0.00	Q	.	.	.	.
1.000	0.0001	0.00	Q	.	.	.	.

1.083	0.0002	0.00	Q	.	.	.	.
1.167	0.0002	0.01	Q	.	.	.	.
1.250	0.0002	0.01	Q	.	.	.	.
1.333	0.0003	0.01	Q	.	.	.	.
1.417	0.0003	0.01	Q	.	.	.	.
1.500	0.0004	0.01	Q	.	.	.	.
1.583	0.0004	0.01	Q	.	.	.	.
1.667	0.0005	0.01	Q	.	.	.	.
1.750	0.0006	0.01	Q	.	.	.	.
1.833	0.0006	0.01	Q	.	.	.	.
1.917	0.0007	0.01	Q	.	.	.	.
2.000	0.0008	0.01	Q	.	.	.	.
2.083	0.0009	0.01	Q	.	.	.	.
2.167	0.0009	0.01	Q	.	.	.	.
2.250	0.0010	0.01	Q	.	.	.	.
2.333	0.0011	0.01	Q	.	.	.	.
2.417	0.0012	0.01	Q	.	.	.	.
2.500	0.0013	0.01	Q	.	.	.	.
2.583	0.0014	0.01	Q	.	.	.	.
2.667	0.0015	0.01	Q	.	.	.	.
2.750	0.0016	0.01	Q	.	.	.	.
2.833	0.0017	0.01	Q	.	.	.	.
2.917	0.0018	0.01	Q	.	.	.	.
3.000	0.0019	0.02	Q	.	.	.	.
3.083	0.0020	0.02	Q	.	.	.	.
3.167	0.0021	0.02	Q	.	.	.	.
3.250	0.0022	0.02	Q	.	.	.	.
3.333	0.0023	0.02	Q	.	.	.	.
3.417	0.0024	0.02	Q	.	.	.	.
3.500	0.0025	0.02	Q	.	.	.	.
3.583	0.0027	0.02	Q	.	.	.	.
3.667	0.0028	0.02	Q	.	.	.	.
3.750	0.0029	0.02	Q	.	.	.	.
3.833	0.0030	0.02	Q	.	.	.	.
3.917	0.0032	0.02	Q	.	.	.	.
4.000	0.0033	0.02	Q	.	.	.	.
4.083	0.0034	0.02	Q	.	.	.	.
4.167	0.0036	0.02	Q	.	.	.	.
4.250	0.0037	0.02	Q	.	.	.	.
4.333	0.0038	0.02	Q	.	.	.	.
4.417	0.0040	0.02	Q	.	.	.	.
4.500	0.0041	0.02	Q	.	.	.	.
4.583	0.0043	0.02	Q	.	.	.	.
4.667	0.0044	0.02	Q	.	.	.	.
4.750	0.0046	0.02	Q	.	.	.	.
4.833	0.0047	0.02	Q	.	.	.	.
4.917	0.0049	0.02	Q	.	.	.	.
5.000	0.0051	0.02	Q	.	.	.	.
5.083	0.0052	0.02	Q	.	.	.	.
5.167	0.0054	0.02	Q	.	.	.	.
5.250	0.0055	0.02	Q	.	.	.	.
5.333	0.0057	0.02	Q	.	.	.	.
5.417	0.0059	0.02	Q	.	.	.	.
5.500	0.0060	0.02	Q	.	.	.	.
5.583	0.0062	0.02	Q	.	.	.	.
5.667	0.0064	0.02	Q	.	.	.	.
5.750	0.0065	0.02	Q	.	.	.	.
5.833	0.0067	0.02	Q	.	.	.	.

5.917	0.0069	0.03	Q	.	.	.	.
6.000	0.0070	0.03	Q	.	.	.	.
6.083	0.0072	0.03	Q	.	.	.	.
6.167	0.0074	0.03	Q	.	.	.	.
6.250	0.0076	0.03	Q	.	.	.	.
6.333	0.0078	0.03	Q	.	.	.	.
6.417	0.0079	0.03	Q	.	.	.	.
6.500	0.0081	0.03	Q	.	.	.	.
6.583	0.0083	0.03	Q	.	.	.	.
6.667	0.0085	0.03	Q	.	.	.	.
6.750	0.0087	0.03	Q	.	.	.	.
6.833	0.0089	0.03	Q	.	.	.	.
6.917	0.0091	0.03	Q	.	.	.	.
7.000	0.0092	0.03	Q	.	.	.	.
7.083	0.0094	0.03	Q	.	.	.	.
7.167	0.0096	0.03	Q	.	.	.	.
7.250	0.0098	0.03	Q	.	.	.	.
7.333	0.0100	0.03	Q	.	.	.	.
7.417	0.0102	0.03	Q	.	.	.	.
7.500	0.0104	0.03	Q	.	.	.	.
7.583	0.0106	0.03	Q	.	.	.	.
7.667	0.0108	0.03	Q	.	.	.	.
7.750	0.0111	0.03	Q	.	.	.	.
7.833	0.0113	0.03	Q	.	.	.	.
7.917	0.0115	0.03	Q	.	.	.	.
8.000	0.0117	0.03	Q	.	.	.	.
8.083	0.0119	0.03	Q	.	.	.	.
8.167	0.0121	0.03	Q	.	.	.	.
8.250	0.0123	0.03	Q	.	.	.	.
8.333	0.0126	0.03	Q	.	.	.	.
8.417	0.0128	0.03	Q	.	.	.	.
8.500	0.0130	0.03	Q	.	.	.	.
8.583	0.0132	0.03	Q	.	.	.	.
8.667	0.0134	0.03	Q	.	.	.	.
8.750	0.0137	0.03	Q	.	.	.	.
8.833	0.0139	0.03	Q	.	.	.	.
8.917	0.0141	0.03	Q	.	.	.	.
9.000	0.0144	0.03	Q	.	.	.	.
9.083	0.0146	0.03	Q	.	.	.	.
9.167	0.0148	0.03	Q	.	.	.	.
9.250	0.0151	0.03	Q	.	.	.	.
9.333	0.0153	0.03	Q	.	.	.	.
9.417	0.0156	0.04	Q	.	.	.	.
9.500	0.0158	0.04	Q	.	.	.	.
9.583	0.0160	0.04	Q	.	.	.	.
9.667	0.0163	0.04	Q	.	.	.	.
9.750	0.0165	0.04	Q	.	.	.	.
9.833	0.0168	0.04	Q	.	.	.	.
9.917	0.0170	0.04	Q	.	.	.	.
10.000	0.0173	0.04	Q	.	.	.	.
10.083	0.0175	0.04	Q	.	.	.	.
10.167	0.0178	0.04	Q	.	.	.	.
10.250	0.0181	0.04	Q	.	.	.	.
10.333	0.0183	0.04	Q	.	.	.	.
10.417	0.0186	0.04	Q	.	.	.	.
10.500	0.0189	0.04	Q	.	.	.	.
10.583	0.0191	0.04	Q	.	.	.	.
10.667	0.0194	0.04	Q	.	.	.	.

10.750	0.0197	0.04	Q	.	.	.	.
10.833	0.0199	0.04	Q	.	.	.	.
10.917	0.0202	0.04	Q	.	.	.	.
11.000	0.0205	0.04	Q	.	.	.	.
11.083	0.0208	0.04	Q	.	.	.	.
11.167	0.0210	0.04	Q	.	.	.	.
11.250	0.0213	0.04	Q	.	.	.	.
11.333	0.0216	0.04	Q	.	.	.	.
11.417	0.0219	0.04	Q	.	.	.	.
11.500	0.0222	0.04	Q	.	.	.	.
11.583	0.0225	0.04	Q	.	.	.	.
11.667	0.0228	0.04	Q	.	.	.	.
11.750	0.0230	0.04	Q	.	.	.	.
11.833	0.0233	0.04	Q	.	.	.	.
11.917	0.0236	0.04	Q	.	.	.	.
12.000	0.0239	0.04	Q	.	.	.	.
12.083	0.0242	0.04	Q	.	.	.	.
12.167	0.0245	0.04	Q	.	.	.	.
12.250	0.0249	0.04	Q	.	.	.	.
12.333	0.0252	0.04	Q	.	.	.	.
12.417	0.0255	0.05	Q	.	.	.	.
12.500	0.0258	0.05	Q	.	.	.	.
12.583	0.0261	0.05	Q	.	.	.	.
12.667	0.0264	0.05	Q	.	.	.	.
12.750	0.0267	0.05	Q	.	.	.	.
12.833	0.0271	0.05	Q	.	.	.	.
12.917	0.0274	0.05	Q	.	.	.	.
13.000	0.0277	0.05	Q	.	.	.	.
13.083	0.0281	0.05	Q	.	.	.	.
13.167	0.0284	0.05	Q	.	.	.	.
13.250	0.0287	0.05	Q	.	.	.	.
13.333	0.0291	0.05	Q	.	.	.	.
13.417	0.0294	0.05	Q	.	.	.	.
13.500	0.0298	0.05	Q	.	.	.	.
13.583	0.0301	0.05	Q	.	.	.	.
13.667	0.0305	0.05	Q	.	.	.	.
13.750	0.0308	0.05	Q	.	.	.	.
13.833	0.0312	0.05	Q	.	.	.	.
13.917	0.0315	0.05	Q	.	.	.	.
14.000	0.0319	0.05	Q	.	.	.	.
14.083	0.0323	0.05	Q	.	.	.	.
14.167	0.0327	0.05	Q	.	.	.	.
14.250	0.0330	0.05	Q	.	.	.	.
14.333	0.0334	0.06	Q	.	.	.	.
14.417	0.0338	0.06	Q	.	.	.	.
14.500	0.0342	0.06	Q	.	.	.	.
14.583	0.0346	0.06	Q	.	.	.	.
14.667	0.0350	0.06	Q	.	.	.	.
14.750	0.0354	0.06	Q	.	.	.	.
14.833	0.0358	0.06	Q	.	.	.	.
14.917	0.0362	0.06	Q	.	.	.	.
15.000	0.0366	0.06	Q	.	.	.	.
15.083	0.0370	0.06	Q	.	.	.	.
15.167	0.0374	0.06	Q	.	.	.	.
15.250	0.0378	0.06	Q	.	.	.	.
15.333	0.0382	0.06	Q	.	.	.	.
15.417	0.0387	0.06	Q	.	.	.	.
15.500	0.0391	0.06	Q	.	.	.	.

15.583	0.0395	0.06	Q	.	.	.	.
15.667	0.0400	0.06	Q	.	.	.	.
15.750	0.0404	0.07	Q	.	.	.	.
15.833	0.0481	1.11	Q	.	.	.	.
15.917	0.0773	4.25	Q	.	.	.	.
16.000	0.1370	8.67	VQ	.	.	.	.
16.083	0.2333	13.98	V Q	.	.	.	.
16.167	0.3792	21.18	V Q	.	.	.	.
16.250	0.5953	31.38	V Q	.	.	.	.
16.333	0.9000	44.24	V Q	.	.	.	.
16.417	1.3300	62.43	.V Q	.	.	.	.
16.500	1.9687	92.75	.V Q	.	.	.	.
16.583	2.8189	123.45	.V Q	.	.	.	.
16.667	3.7925	141.36	.V Q	.	.	.	.
16.750	4.8270	150.21	.V Q	.	.	.	.
16.833	5.8825	153.27	.V Q	.	.	.	.
16.917	6.9332	152.55	.V Q	.	.	.	.
17.000	7.9620	149.39	.V Q	.	.	.	.
17.083	8.9612	145.07	.V Q	.	.	.	.
17.167	9.9275	140.31	.V Q	.	.	.	.
17.250	10.8581	135.13	.V Q	.	.	.	.
17.333	11.7506	129.58	.V Q	.	.	.	.
17.417	12.6034	123.83	.V Q	.	.	.	.
17.500	13.4161	118.01	.V Q	.	.	.	.
17.583	14.1897	112.32	.V Q	.	.	.	.
17.667	14.9255	106.83	.V Q	.	.	.	.
17.750	15.6253	101.61	.V Q	.	.	.	.
17.833	16.2913	96.70	.V Q	.	.	.	.
17.917	16.9256	92.10	.V Q	.	.	.	.
18.000	17.5303	87.81	.V Q	.	.	.	.
18.083	18.1075	83.80	.VQ	.	.	.	.
18.167	18.6588	80.04	.VQ	.	.	.	.
18.250	19.1855	76.48	.QV	.	.	.	.
18.333	19.6885	73.04	.Q V	.	.	.	.
18.417	20.1684	69.69	.Q V	.	.	.	.
18.500	20.6260	66.44	.Q V	.	.	.	.
18.583	21.0625	63.39	.Q V	.	.	.	.
18.667	21.4859	61.47	.Q V	.	.	.	.
18.750	21.9028	60.54	.Q V	.	.	.	.
18.833	22.3134	59.61	.Q V	.	.	.	.
18.917	22.7175	58.68	.Q V	.	.	.	.
19.000	23.1152	57.75	.Q V	.	.	.	.
19.083	23.5066	56.83	.Q V	.	.	.	.
19.167	23.8917	55.92	.Q V	.	.	.	.
19.250	24.2706	55.02	.Q V	.	.	.	.
19.333	24.6434	54.13	.Q V	.	.	.	.
19.417	25.0102	53.25	.Q V	.	.	.	.
19.500	25.3710	52.39	.Q .V	.	.	.	.
19.583	25.7260	51.54	.Q .V	.	.	.	.
19.667	26.0752	50.70	.Q .V	.	.	.	.
19.750	26.4187	49.88	.Q .V	.	.	.	.
19.833	26.7566	49.07	.Q .V	.	.	.	.
19.917	27.0891	48.27	.Q .V	.	.	.	.
20.000	27.4162	47.49	.Q .V	.	.	.	.
20.083	27.7380	46.72	.Q .V	.	.	.	.
20.167	28.0546	45.97	.Q .V	.	.	.	.
20.250	28.3661	45.23	.Q .V	.	.	.	.
20.333	28.6726	44.51	.Q .V	.	.	.	.

20.417	28.9742	43.79	. Q .	. V .	.	.	.
20.500	29.2710	43.10	. Q .	. V .	.	.	.
20.583	29.5631	42.41	. Q .	. V .	.	.	.
20.667	29.8506	41.74	. Q .	. V .	.	.	.
20.750	30.1336	41.09	. Q .	. V .	.	.	.
20.833	30.4121	40.44	. Q .	. V .	.	.	.
20.917	30.6863	39.81	. Q .	. V .	.	.	.
21.000	30.9563	39.20	. Q .	. V .	.	.	.
21.083	31.2221	38.59	. Q .	. V .	.	.	.
21.167	31.4838	38.00	. Q .	. V .	.	.	.
21.250	31.7415	37.42	. Q .	. V .	.	.	.
21.333	31.9953	36.85	. Q .	. V .	.	.	.
21.417	32.2453	36.30	. Q .	. V .	.	.	.
21.500	32.4916	35.76	. Q .	. V .	.	.	.
21.583	32.7342	35.22	. Q .	. V .	.	.	.
21.667	32.9732	34.70	. Q .	. V .	.	.	.
21.750	33.2087	34.19	. Q .	. V .	.	.	.
21.833	33.4408	33.70	. Q .	. V .	.	.	.
21.917	33.6695	33.21	. Q .	. V .	.	.	.
22.000	33.8949	32.73	. Q .	. V .	.	.	.
22.083	34.1171	32.27	. Q .	. V .	.	.	.
22.167	34.3362	31.81	. Q .	. V .	.	.	.
22.250	34.5522	31.36	. Q .	. V .	.	.	.
22.333	34.7652	30.93	. Q .	. V .	.	.	.
22.417	34.9752	30.50	. Q .	. V .	.	.	.
22.500	35.1824	30.08	. Q .	. V .	.	.	.
22.583	35.3867	29.67	. Q .	. V .	.	.	.
22.667	35.5883	29.27	. Q .	. V .	.	.	.
22.750	35.7872	28.88	. Q .	. V .	.	.	.
22.833	35.9834	28.50	. Q .	. V .	.	.	.
22.917	36.1771	28.12	. Q .	. V .	.	.	.
23.000	36.3683	27.76	. Q .	. V .	.	.	.
23.083	36.5570	27.40	. Q .	. V .	.	.	.
23.167	36.7432	27.05	. Q .	. V .	.	.	.
23.250	36.9271	26.70	. Q .	. V .	.	.	.
23.333	37.1087	26.37	. Q .	. V .	.	.	.
23.417	37.2880	26.04	. Q .	. V .	.	.	.
23.500	37.4652	25.72	. Q .	. V .	.	.	.
23.583	37.6401	25.40	. Q .	. V .	.	.	.
23.667	37.8129	25.10	. Q .	. V .	.	.	.
23.750	37.9837	24.79	. Q .	. V .	.	.	.
23.833	38.1524	24.50	. Q .	. V .	.	.	.
23.917	38.3192	24.21	. Q .	. V .	.	.	.
24.000	38.4840	23.93	. Q .	. V .	.	.	.
24.083	38.6468	23.65	. Q .	. V .	.	.	.
24.167	38.8077	23.36	. Q .	. V .	.	.	.
24.250	38.9663	23.03	. Q .	. V .	.	.	.
24.333	39.1222	22.63	. Q .	. V .	.	.	.
24.417	39.2748	22.16	. Q .	. V .	.	.	.
24.500	39.4235	21.59	. Q .	. V .	.	.	.
24.583	39.5679	20.97	. Q .	. V .	.	.	.
24.667	39.7079	20.32	. Q .	. V .	.	.	.
24.750	39.8433	19.66	. Q .	. V .	.	.	.
24.833	39.9743	19.01	. Q .	. V .	.	.	.
24.917	40.1007	18.36	. Q .	. V .	.	.	.
25.000	40.2229	17.73	. Q .	. V .	.	.	.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:

(Note: 100% of Peak Flow Rate estimate assumed to have an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1505.0
10%	555.0
20%	370.0
30%	225.0
40%	140.0
50%	105.0
60%	90.0
70%	65.0
80%	55.0
90%	35.0

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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED C *
* UNIT HYDROGRAPH - COMPLEX MODEL - SINGLE BASIN *
* 5-YR EV APRIL 2023 ROKAMOTO *

FILE NAME: 3C05EVC.DAT
TIME/DATE OF STUDY: 12:30 04/29/2023

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 712.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.338 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.167
LOW LOSS FRACTION = 0.352
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.18
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.41
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.55
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.92
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.27
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.12

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 24.655

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.471	126.749
2	7.192	493.042
3	20.268	1126.910
4	37.509	1485.822
5	58.405	1800.795
6	75.493	1472.694
7	86.185	921.389
8	92.254	523.036
9	95.857	310.538
10	97.777	165.495
11	98.448	57.757
12	98.910	39.843
13	99.361	38.894
14	99.745	33.026
15	99.936	16.513
16	100.000	5.504

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 40.8017
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 84.7203

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	125.0	250.0	375.0	500.0
0.083	0.0015	0.22	Q	.	.	.	.
0.167	0.0091	1.10	Q	.	.	.	.
0.250	0.0304	3.09	Q	.	.	.	.
0.333	0.0698	5.72	Q	.	.	.	.
0.417	0.1312	8.92	Q	.	.	.	.
0.500	0.2107	11.55	Q	.	.	.	.
0.583	0.3018	13.21	VQ	.	.	.	.
0.667	0.3994	14.18	VQ	.	.	.	.
0.750	0.5012	14.78	VQ	.	.	.	.
0.833	0.6053	15.12	VQ	.	.	.	.
0.917	0.7105	15.27	VQ	.	.	.	.
1.000	0.8165	15.39	VQ	.	.	.	.
1.083	0.9234	15.52	VQ	.	.	.	.
1.167	1.0310	15.63	VQ	.	.	.	.
1.250	1.1392	15.71	VQ	.	.	.	.
1.333	1.2478	15.77	VQ	.	.	.	.
1.417	1.3568	15.83	VQ	.	.	.	.
1.500	1.4662	15.88	VQ	.	.	.	.
1.583	1.5760	15.94	VQ	.	.	.	.
1.667	1.6862	16.00	VQ	.	.	.	.
1.750	1.7968	16.05	VQ	.	.	.	.
1.833	1.9077	16.11	VQ	.	.	.	.
1.917	2.0191	16.17	VQ	.	.	.	.
2.000	2.1309	16.23	.Q	.	.	.	.
2.083	2.2430	16.29	.Q	.	.	.	.
2.167	2.3556	16.35	.Q	.	.	.	.
2.250	2.4686	16.41	.Q	.	.	.	.
2.333	2.5821	16.47	.Q	.	.	.	.
2.417	2.6959	16.53	.Q	.	.	.	.
2.500	2.8102	16.59	.Q	.	.	.	.
2.583	2.9249	16.66	.Q	.	.	.	.
2.667	3.0401	16.72	.Q	.	.	.	.
2.750	3.1557	16.78	.Q	.	.	.	.
2.833	3.2717	16.85	.Q	.	.	.	.
2.917	3.3882	16.91	.Q	.	.	.	.
3.000	3.5051	16.98	.Q	.	.	.	.
3.083	3.6225	17.05	.Q	.	.	.	.
3.167	3.7404	17.11	.Q	.	.	.	.
3.250	3.8587	17.18	.Q	.	.	.	.
3.333	3.9775	17.25	.Q	.	.	.	.
3.417	4.0968	17.32	.Q	.	.	.	.
3.500	4.2166	17.39	.Q	.	.	.	.
3.583	4.3368	17.46	.QV	.	.	.	.
3.667	4.4576	17.53	.QV	.	.	.	.
3.750	4.5788	17.61	.QV	.	.	.	.
3.833	4.7006	17.68	.QV	.	.	.	.
3.917	4.8228	17.75	.QV	.	.	.	.

4.000	4.9456	17.83	.QV	.	.	.	.
4.083	5.0689	17.90	.QV	.	.	.	.
4.167	5.1927	17.98	.QV	.	.	.	.
4.250	5.3171	18.06	.QV	.	.	.	.
4.333	5.4420	18.13	.QV	.	.	.	.
4.417	5.5674	18.21	.QV	.	.	.	.
4.500	5.6934	18.29	.QV	.	.	.	.
4.583	5.8200	18.38	.QV	.	.	.	.
4.667	5.9471	18.46	.QV	.	.	.	.
4.750	6.0748	18.54	.QV	.	.	.	.
4.833	6.2030	18.62	.QV	.	.	.	.
4.917	6.3319	18.71	.QV	.	.	.	.
5.000	6.4613	18.79	.Q V	.	.	.	.
5.083	6.5913	18.88	.Q V	.	.	.	.
5.167	6.7220	18.97	.Q V	.	.	.	.
5.250	6.8532	19.06	.Q V	.	.	.	.
5.333	6.9851	19.15	.Q V	.	.	.	.
5.417	7.1176	19.24	.Q V	.	.	.	.
5.500	7.2507	19.33	.Q V	.	.	.	.
5.583	7.3845	19.42	.Q V	.	.	.	.
5.667	7.5189	19.52	.Q V	.	.	.	.
5.750	7.6540	19.61	.Q V	.	.	.	.
5.833	7.7897	19.71	.Q V	.	.	.	.
5.917	7.9261	19.81	.Q V	.	.	.	.
6.000	8.0632	19.91	.Q V	.	.	.	.
6.083	8.2011	20.01	.Q V	.	.	.	.
6.167	8.3396	20.11	.Q V	.	.	.	.
6.250	8.4788	20.22	.Q V	.	.	.	.
6.333	8.6187	20.32	.Q V	.	.	.	.
6.417	8.7594	20.43	.Q V	.	.	.	.
6.500	8.9008	20.53	.Q V	.	.	.	.
6.583	9.0430	20.64	.Q V	.	.	.	.
6.667	9.1859	20.75	.Q V	.	.	.	.
6.750	9.3296	20.87	.Q V	.	.	.	.
6.833	9.4741	20.98	.Q V	.	.	.	.
6.917	9.6194	21.10	.Q V	.	.	.	.
7.000	9.7655	21.21	.Q V	.	.	.	.
7.083	9.9124	21.33	.Q V	.	.	.	.
7.167	10.0601	21.45	.Q V	.	.	.	.
7.250	10.2087	21.57	.Q V	.	.	.	.
7.333	10.3582	21.70	.Q V	.	.	.	.
7.417	10.5085	21.83	.Q V	.	.	.	.
7.500	10.6597	21.95	.Q V	.	.	.	.
7.583	10.8117	22.08	.Q V	.	.	.	.
7.667	10.9647	22.21	.Q V	.	.	.	.
7.750	11.1187	22.35	.Q V	.	.	.	.
7.833	11.2735	22.48	.Q V	.	.	.	.
7.917	11.4293	22.62	.Q V	.	.	.	.
8.000	11.5861	22.76	.Q V	.	.	.	.
8.083	11.7439	22.91	.Q V	.	.	.	.
8.167	11.9026	23.05	.Q V	.	.	.	.
8.250	12.0624	23.20	.Q V	.	.	.	.
8.333	12.2232	23.35	.Q V	.	.	.	.
8.417	12.3851	23.50	.Q V	.	.	.	.
8.500	12.5480	23.66	.Q V	.	.	.	.
8.583	12.7120	23.82	.Q V	.	.	.	.
8.667	12.8771	23.98	.Q V	.	.	.	.
8.750	13.0434	24.14	.Q V	.	.	.	.

8.833	13.2108	24.31	.Q	V	.	.	.
8.917	13.3793	24.48	.Q	V	.	.	.
9.000	13.5491	24.65	.Q	V	.	.	.
9.083	13.7200	24.82	.Q	V	.	.	.
9.167	13.8922	25.00	.Q	V	.	.	.
9.250	14.0657	25.19	.Q	V	.	.	.
9.333	14.2404	25.37	.Q	V	.	.	.
9.417	14.4165	25.56	.Q	V	.	.	.
9.500	14.5938	25.75	.Q	V	.	.	.
9.583	14.7725	25.95	.Q	V	.	.	.
9.667	14.9526	26.15	.Q	V	.	.	.
9.750	15.1342	26.36	.Q	V	.	.	.
9.833	15.3171	26.57	.Q	V	.	.	.
9.917	15.5016	26.78	.Q	V	.	.	.
10.000	15.6875	27.00	.Q	V	.	.	.
10.083	15.8750	27.22	.Q	V	.	.	.
10.167	16.0640	27.45	.Q	V	.	.	.
10.250	16.2547	27.68	.Q	V	.	.	.
10.333	16.4469	27.92	.Q	V	.	.	.
10.417	16.6409	28.16	.Q	V	.	.	.
10.500	16.8365	28.41	.Q	V	.	.	.
10.583	17.0340	28.67	.Q	V	.	.	.
10.667	17.2332	28.93	.Q	V	.	.	.
10.750	17.4342	29.19	.Q	V	.	.	.
10.833	17.6372	29.47	.Q	V	.	.	.
10.917	17.8420	29.75	.Q	V	.	.	.
11.000	18.0489	30.03	.Q	V	.	.	.
11.083	18.2577	30.33	.Q	V	.	.	.
11.167	18.4687	30.63	.Q	V	.	.	.
11.250	18.6818	30.94	.Q	V	.	.	.
11.333	18.8970	31.26	.Q	V	.	.	.
11.417	19.1146	31.58	.Q	V	.	.	.
11.500	19.3344	31.92	.Q	V	.	.	.
11.583	19.5566	32.27	.Q	V	.	.	.
11.667	19.7812	32.62	.Q	V	.	.	.
11.750	20.0084	32.99	.Q	V	.	.	.
11.833	20.2381	33.36	.Q	V	.	.	.
11.917	20.4706	33.75	.Q	V	.	.	.
12.000	20.7057	34.15	.Q	V	.	.	.
12.083	20.9448	34.71	.Q	V	.	.	.
12.167	21.1906	35.69	.Q	V	.	.	.
12.250	21.4483	37.43	.Q	V	.	.	.
12.333	21.7209	39.58	.Q	V	.	.	.
12.417	22.0111	42.13	.Q	V	.	.	.
12.500	22.3163	44.32	.Q	V	.	.	.
12.583	22.6324	45.90	.Q	V	.	.	.
12.667	22.9564	47.04	.Q	V	.	.	.
12.750	23.2868	47.97	.Q	V	.	.	.
12.833	23.6225	48.75	.Q	.V	.	.	.
12.917	23.9629	49.43	.Q	.V	.	.	.
13.000	24.3080	50.11	.Q	.V	.	.	.
13.083	24.6580	50.82	.Q	.V	.	.	.
13.167	25.0129	51.53	.Q	.V	.	.	.
13.250	25.3729	52.27	.Q	.V	.	.	.
13.333	25.7380	53.02	.Q	.V	.	.	.
13.417	26.1085	53.80	.Q	.V	.	.	.
13.500	26.4845	54.60	.Q	.V	.	.	.
13.583	26.8664	55.45	.Q	.V	.	.	.

13.667	27.2543	56.33	.Q	.V	.	.	.
13.750	27.6487	57.26	.Q	.V	.	.	.
13.833	28.0496	58.22	.Q	.V	.	.	.
13.917	28.4577	59.25	.Q	.V	.	.	.
14.000	28.8731	60.32	.Q	.V	.	.	.
14.083	29.2970	61.55	.Q	.V	.	.	.
14.167	29.7315	63.09	.Q	.V	.	.	.
14.250	30.1803	65.16	.Q	.V	.	.	.
14.333	30.6455	67.55	.Q	.V	.	.	.
14.417	31.1294	70.26	.Q	.V	.	.	.
14.500	31.6309	72.82	.Q	.V	.	.	.
14.583	32.1482	75.11	.Q	.V	.	.	.
14.667	32.6800	77.22	.Q	.V	.	.	.
14.750	33.2263	79.33	.Q	.V	.	.	.
14.833	33.7873	81.46	.Q	.V	.	.	.
14.917	34.3639	83.71	.Q	.V	.	.	.
15.000	34.9570	86.11	.Q	.V	.	.	.
15.083	35.5684	88.78	.Q	.V	.	.	.
15.167	36.1996	91.66	.Q	.V	.	.	.
15.250	36.8532	94.89	.Q	.V	.	.	.
15.333	37.5311	98.43	.Q	.V	.	.	.
15.417	38.2348	102.17	.Q	.V	.	.	.
15.500	38.9612	105.47	.Q	.V	.	.	.
15.583	39.7048	107.98	.Q	.V	.	.	.
15.667	40.4652	110.41	.Q	.V	.	.	.
15.750	41.2481	113.68	.Q	.V	.	.	.
15.833	42.0752	120.09	.Q	.V	.	.	.
15.917	42.9890	132.68	.Q	.V	.	.	.
16.000	44.0516	154.30	.Q	.V	.	.	.
16.083	45.4514	203.25	.	.Q	.V	.	.
16.167	47.4259	286.69	.	.	.Q	.	.
16.250	50.1384	393.85	.	.	.V	.Q	.
16.333	53.2422	450.67	.	.	.V	.	.Q
16.417	56.5046	473.70	.	.	.V	.	.Q
16.500	59.2673	401.15	.	.	.	.V	.Q
16.583	61.3260	298.92	.	.	.Q	.V	.
16.667	62.8510	221.43	.	.	.Q	.V	.
16.750	64.0505	174.17	.	.Q	.	.V	.
16.833	65.0195	140.70	.	.Q	.	.V	.
16.917	65.8205	116.31	.	.Q	.	.V	.
17.000	66.5482	105.65	.	.Q	.	.V	.
17.083	67.2274	98.63	.	.Q	.	.V	.
17.167	67.8576	91.50	.	.Q	.	.V	.
17.250	68.4316	83.34	.	.Q	.	.V	.
17.333	68.9582	76.47	.	.Q	.	.V	.
17.417	69.4464	70.89	.	.Q	.	.V	.
17.500	69.9064	66.78	.	.Q	.	.V	.
17.583	70.3435	63.46	.	.Q	.	.V	.
17.667	70.7616	60.72	.	.Q	.	.V	.
17.750	71.1636	58.37	.	.Q	.	.V	.
17.833	71.5516	56.33	.	.Q	.	.V	.
17.917	71.9273	54.55	.	.Q	.	.V	.
18.000	72.2918	52.93	.	.Q	.	.V	.
18.083	72.6451	51.30	.	.Q	.	.V	.
18.167	72.9851	49.36	.	.Q	.	.V	.
18.250	73.3075	46.82	.	.Q	.	.V	.
18.333	73.6104	43.97	.	.Q	.	.V	.
18.417	73.8917	40.85	.	.Q	.	.V	.

18.500	74.1547	38.19	. Q	.	.	.	V	.
18.583	74.4043	36.23	. Q	.	.	.	V	.
18.667	74.6439	34.79	. Q	.	.	.	V	.
18.750	74.8757	33.65	. Q	.	.	.	V	.
18.833	75.1010	32.72	. Q	.	.	.	V	.
18.917	75.3211	31.96	. Q	.	.	.	V	.
19.000	75.5364	31.25	. Q	.	.	.	V	.
19.083	75.7470	30.58	. Q	.	.	.	V	.
19.167	75.9533	29.95	. Q	.	.	.	V	.
19.250	76.1556	29.37	. Q	.	.	.	V	.
19.333	76.3541	28.83	. Q	.	.	.	V	.
19.417	76.5491	28.31	. Q	.	.	.	V	.
19.500	76.7407	27.83	. Q	.	.	.	V	.
19.583	76.9292	27.36	. Q	.	.	.	V	.
19.667	77.1145	26.91	. Q	.	.	.	V	.
19.750	77.2969	26.48	. Q	.	.	.	V	.
19.833	77.4764	26.07	. Q	.	.	.	V	.
19.917	77.6532	25.67	. Q	.	.	.	V	.
20.000	77.8274	25.29	. Q	.	.	.	V	.
20.083	77.9991	24.93	.Q	.	.	.	V	.
20.167	78.1684	24.58	.Q	.	.	.	V	.
20.250	78.3353	24.24	.Q	.	.	.	V	.
20.333	78.4999	23.91	.Q	.	.	.	V	.
20.417	78.6624	23.59	.Q	.	.	.	V	.
20.500	78.8228	23.28	.Q	.	.	.	V	.
20.583	78.9811	22.99	.Q	.	.	.	V	.
20.667	79.1374	22.70	.Q	.	.	.	V	.
20.750	79.2919	22.42	.Q	.	.	.	V	.
20.833	79.4445	22.16	.Q	.	.	.	V	.
20.917	79.5953	21.90	.Q	.	.	.	V	.
21.000	79.7443	21.64	.Q	.	.	.	V	.
21.083	79.8917	21.40	.Q	.	.	.	V	.
21.167	80.0374	21.16	.Q	.	.	.	V	.
21.250	80.1815	20.93	.Q	.	.	.	V	.
21.333	80.3241	20.70	.Q	.	.	.	V	.
21.417	80.4652	20.48	.Q	.	.	.	V	.
21.500	80.6048	20.27	.Q	.	.	.	V	.
21.583	80.7430	20.06	.Q	.	.	.	V	.
21.667	80.8798	19.86	.Q	.	.	.	V	.
21.750	81.0152	19.67	.Q	.	.	.	V	.
21.833	81.1493	19.47	.Q	.	.	.	V	.
21.917	81.2821	19.29	.Q	.	.	.	V	.
22.000	81.4137	19.10	.Q	.	.	.	V	.
22.083	81.5441	18.93	.Q	.	.	.	V	.
22.167	81.6732	18.75	.Q	.	.	.	V	.
22.250	81.8012	18.58	.Q	.	.	.	V	.
22.333	81.9280	18.42	.Q	.	.	.	V	.
22.417	82.0537	18.26	.Q	.	.	.	V	.
22.500	82.1784	18.10	.Q	.	.	.	V	.
22.583	82.3019	17.94	.Q	.	.	.	V	.
22.667	82.4245	17.79	.Q	.	.	.	V	.
22.750	82.5460	17.64	.Q	.	.	.	V	.
22.833	82.6665	17.50	.Q	.	.	.	V	.
22.917	82.7860	17.36	.Q	.	.	.	V	.
23.000	82.9046	17.22	.Q	.	.	.	V	.
23.083	83.0222	17.08	.Q	.	.	.	V	.
23.167	83.1389	16.95	.Q	.	.	.	V	.
23.250	83.2547	16.82	.Q	.	.	.	V	.

23.333	83.3697	16.69	.Q	.	.	.	V	.
23.417	83.4837	16.56	.Q	.	.	.	V	.
23.500	83.5970	16.44	.Q	.	.	.	V	.
23.583	83.7093	16.32	.Q	.	.	.	V	.
23.667	83.8209	16.20	.Q	.	.	.	V	.
23.750	83.9317	16.08	.Q	.	.	.	V	.
23.833	84.0417	15.97	.Q	.	.	.	V	.
23.917	84.1509	15.86	.Q	.	.	.	V	.
24.000	84.2593	15.75	.Q	.	.	.	V	.
24.083	84.3655	15.42	.Q	.	.	.	V	.
24.167	84.4650	14.44	.Q	.	.	.	V	.
24.250	84.5501	12.36	Q	.	.	.	V	.
24.333	84.6166	9.66	Q	.	.	.	V	.
24.417	84.6608	6.42	Q	.	.	.	V	.
24.500	84.6868	3.78	Q	.	.	.	V	.
24.583	84.7015	2.13	Q	.	.	.	V	.
24.667	84.7097	1.19	Q	.	.	.	V	.
24.750	84.7141	0.64	Q	.	.	.	V	.
24.833	84.7165	0.34	Q	.	.	.	V	.
24.917	84.7182	0.24	Q	.	.	.	V	.
25.000	84.7193	0.17	Q	.	.	.	V	.
25.083	84.7200	0.10	Q	.	.	.	V	.
25.167	84.7202	0.04	Q	.	.	.	V	.
25.250	84.7203	0.01	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1515.0
10%	330.0
20%	115.0
30%	50.0
40%	40.0
50%	30.0
60%	30.0
70%	20.0
80%	20.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 462.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.

VALLEY (DEVELOPED) S-GRAPH SELECTED
 MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.225
 LOW LOSS FRACTION = 0.443
 HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.18
 SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.41
 SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.55
 SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 0.92
 SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.27
 SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 2.12

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
 5-MINUTE FACTOR = 0.942
 30-MINUTE FACTOR = 0.942
 1-HOUR FACTOR = 0.942
 3-HOUR FACTOR = 0.991
 6-HOUR FACTOR = 0.996
 24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
 UNIT INTERVAL PERCENTAGE OF LAG-TIME = 28.249

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.736	97.108
2	9.629	441.481
3	26.094	920.928
4	48.098	1230.770
5	70.345	1244.334
6	84.388	785.478
7	91.977	424.486
8	96.067	228.767
9	98.010	108.705
10	98.626	34.425
11	99.155	29.623
12	99.662	28.352
13	99.916	14.176
14	100.000	4.725

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 33.4730
 TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 47.9984

24 - HOUR STORM
 RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	100.0	200.0	300.0	400.0
0.083	0.0010	0.15	Q	.	.	.	.
0.167	0.0066	0.82	Q	.	.	.	.
0.250	0.0219	2.22	Q	.	.	.	.
0.333	0.0501	4.09	Q	.	.	.	.
0.417	0.0914	6.00	Q	.	.	.	.
0.500	0.1410	7.21	Q	.	.	.	.
0.583	0.1953	7.87	Q	.	.	.	.
0.667	0.2521	8.25	Q	.	.	.	.
0.750	0.3102	8.44	Q	.	.	.	.
0.833	0.3689	8.52	Q	.	.	.	.
0.917	0.4281	8.60	Q	.	.	.	.
1.000	0.4878	8.67	Q	.	.	.	.
1.083	0.5478	8.72	Q	.	.	.	.
1.167	0.6081	8.76	Q	.	.	.	.
1.250	0.6687	8.79	Q	.	.	.	.
1.333	0.7294	8.82	Q	.	.	.	.
1.417	0.7903	8.85	Q	.	.	.	.
1.500	0.8515	8.88	Q	.	.	.	.
1.583	0.9128	8.91	Q	.	.	.	.
1.667	0.9744	8.94	Q	.	.	.	.
1.750	1.0362	8.97	Q	.	.	.	.
1.833	1.0982	9.01	Q	.	.	.	.
1.917	1.1605	9.04	Q	.	.	.	.
2.000	1.2230	9.07	QV	.	.	.	.
2.083	1.2857	9.11	QV	.	.	.	.
2.167	1.3486	9.14	QV	.	.	.	.
2.250	1.4118	9.17	QV	.	.	.	.
2.333	1.4752	9.21	QV	.	.	.	.
2.417	1.5389	9.24	QV	.	.	.	.
2.500	1.6027	9.28	QV	.	.	.	.
2.583	1.6669	9.31	QV	.	.	.	.
2.667	1.7312	9.35	QV	.	.	.	.
2.750	1.7959	9.38	QV	.	.	.	.
2.833	1.8607	9.42	QV	.	.	.	.
2.917	1.9259	9.46	QV	.	.	.	.
3.000	1.9912	9.49	QV	.	.	.	.
3.083	2.0569	9.53	QV	.	.	.	.
3.167	2.1228	9.57	QV	.	.	.	.
3.250	2.1889	9.61	QV	.	.	.	.
3.333	2.2554	9.64	QV	.	.	.	.
3.417	2.3220	9.68	QV	.	.	.	.
3.500	2.3890	9.72	QV	.	.	.	.
3.583	2.4563	9.76	Q V	.	.	.	.
3.667	2.5238	9.80	Q V	.	.	.	.
3.750	2.5916	9.84	Q V	.	.	.	.
3.833	2.6596	9.88	Q V	.	.	.	.
3.917	2.7280	9.93	Q V	.	.	.	.

4.000	2.7967	9.97	Q V	.	.	.	.
4.083	2.8656	10.01	.QV	.	.	.	.
4.167	2.9348	10.05	.QV	.	.	.	.
4.250	3.0044	10.10	.QV	.	.	.	.
4.333	3.0742	10.14	.QV	.	.	.	.
4.417	3.1444	10.19	.QV	.	.	.	.
4.500	3.2148	10.23	.QV	.	.	.	.
4.583	3.2856	10.28	.QV	.	.	.	.
4.667	3.3567	10.32	.QV	.	.	.	.
4.750	3.4281	10.37	.QV	.	.	.	.
4.833	3.4998	10.41	.QV	.	.	.	.
4.917	3.5719	10.46	.QV	.	.	.	.
5.000	3.6443	10.51	.Q V	.	.	.	.
5.083	3.7170	10.56	.Q V	.	.	.	.
5.167	3.7900	10.61	.Q V	.	.	.	.
5.250	3.8635	10.66	.Q V	.	.	.	.
5.333	3.9372	10.71	.Q V	.	.	.	.
5.417	4.0113	10.76	.Q V	.	.	.	.
5.500	4.0858	10.81	.Q V	.	.	.	.
5.583	4.1606	10.86	.Q V	.	.	.	.
5.667	4.2358	10.92	.Q V	.	.	.	.
5.750	4.3114	10.97	.Q V	.	.	.	.
5.833	4.3873	11.03	.Q V	.	.	.	.
5.917	4.4636	11.08	.Q V	.	.	.	.
6.000	4.5403	11.14	.Q V	.	.	.	.
6.083	4.6174	11.19	.Q V	.	.	.	.
6.167	4.6949	11.25	.Q V	.	.	.	.
6.250	4.7728	11.31	.Q V	.	.	.	.
6.333	4.8511	11.37	.Q V	.	.	.	.
6.417	4.9298	11.43	.Q V	.	.	.	.
6.500	5.0089	11.49	.Q V	.	.	.	.
6.583	5.0884	11.55	.Q V	.	.	.	.
6.667	5.1684	11.61	.Q V	.	.	.	.
6.750	5.2488	11.68	.Q V	.	.	.	.
6.833	5.3297	11.74	.Q V	.	.	.	.
6.917	5.4110	11.80	.Q V	.	.	.	.
7.000	5.4927	11.87	.Q V	.	.	.	.
7.083	5.5749	11.94	.Q V	.	.	.	.
7.167	5.6576	12.00	.Q V	.	.	.	.
7.250	5.7407	12.07	.Q V	.	.	.	.
7.333	5.8244	12.14	.Q V	.	.	.	.
7.417	5.9085	12.21	.Q V	.	.	.	.
7.500	5.9931	12.29	.Q V	.	.	.	.
7.583	6.0782	12.36	.Q V	.	.	.	.
7.667	6.1639	12.43	.Q V	.	.	.	.
7.750	6.2500	12.51	.Q V	.	.	.	.
7.833	6.3367	12.59	.Q V	.	.	.	.
7.917	6.4239	12.66	.Q V	.	.	.	.
8.000	6.5117	12.74	.Q V	.	.	.	.
8.083	6.6000	12.82	.Q V	.	.	.	.
8.167	6.6888	12.90	.Q V	.	.	.	.
8.250	6.7783	12.99	.Q V	.	.	.	.
8.333	6.8683	13.07	.Q V	.	.	.	.
8.417	6.9589	13.16	.Q V	.	.	.	.
8.500	7.0502	13.25	.Q V	.	.	.	.
8.583	7.1420	13.33	.Q V	.	.	.	.
8.667	7.2345	13.42	.Q V	.	.	.	.
8.750	7.3275	13.52	.Q V	.	.	.	.

8.833	7.4213	13.61	.Q V	.	.	.	.
8.917	7.5157	13.71	.Q V	.	.	.	.
9.000	7.6107	13.80	.Q V	.	.	.	.
9.083	7.7065	13.90	.Q V	.	.	.	.
9.167	7.8029	14.00	.Q V	.	.	.	.
9.250	7.9001	14.11	.Q V	.	.	.	.
9.333	7.9979	14.21	.Q V	.	.	.	.
9.417	8.0966	14.32	.Q V	.	.	.	.
9.500	8.1959	14.43	.Q V	.	.	.	.
9.583	8.2960	14.54	.Q V	.	.	.	.
9.667	8.3969	14.65	.Q V	.	.	.	.
9.750	8.4986	14.77	.Q V	.	.	.	.
9.833	8.6011	14.88	.Q V	.	.	.	.
9.917	8.7045	15.01	.Q V	.	.	.	.
10.000	8.8087	15.13	.Q V	.	.	.	.
10.083	8.9137	15.25	.Q V	.	.	.	.
10.167	9.0197	15.38	.Q V	.	.	.	.
10.250	9.1265	15.51	.Q V	.	.	.	.
10.333	9.2343	15.65	.Q V	.	.	.	.
10.417	9.3430	15.79	.Q V	.	.	.	.
10.500	9.4527	15.93	.Q V	.	.	.	.
10.583	9.5634	16.07	.Q V	.	.	.	.
10.667	9.6750	16.22	.Q V	.	.	.	.
10.750	9.7878	16.37	.Q V	.	.	.	.
10.833	9.9015	16.52	.Q V	.	.	.	.
10.917	10.0164	16.68	.Q V	.	.	.	.
11.000	10.1324	16.84	.Q V	.	.	.	.
11.083	10.2496	17.01	.Q V	.	.	.	.
11.167	10.3679	17.18	.Q V	.	.	.	.
11.250	10.4874	17.36	.Q V	.	.	.	.
11.333	10.6082	17.53	.Q V	.	.	.	.
11.417	10.7302	17.72	.Q V	.	.	.	.
11.500	10.8535	17.91	.Q V	.	.	.	.
11.583	10.9782	18.11	.Q V	.	.	.	.
11.667	11.1043	18.31	.Q V	.	.	.	.
11.750	11.2318	18.51	.Q V	.	.	.	.
11.833	11.3608	18.73	.Q V	.	.	.	.
11.917	11.4912	18.95	.Q V	.	.	.	.
12.000	11.6233	19.17	.Q V	.	.	.	.
12.083	11.7576	19.50	.Q V	.	.	.	.
12.167	11.8965	20.18	. Q V	.	.	.	.
12.250	12.0434	21.33	. Q V	.	.	.	.
12.333	12.2005	22.81	. Q V	.	.	.	.
12.417	12.3679	24.31	. Q V	.	.	.	.
12.500	12.5426	25.37	. Q V	.	.	.	.
12.583	12.7223	26.09	. Q V	.	.	.	.
12.667	12.9056	26.62	. Q V	.	.	.	.
12.750	13.0919	27.05	. Q V	.	.	.	.
12.833	13.2808	27.42	. Q .V	.	.	.	.
12.917	13.4722	27.80	. Q .V	.	.	.	.
13.000	13.6664	28.19	. Q .V	.	.	.	.
13.083	13.8632	28.58	. Q .V	.	.	.	.
13.167	14.0627	28.97	. Q .V	.	.	.	.
13.250	14.2651	29.38	. Q .V	.	.	.	.
13.333	14.4703	29.80	. Q . V	.	.	.	.
13.417	14.6786	30.25	. Q . V	.	.	.	.
13.500	14.8901	30.70	. Q . V	.	.	.	.
13.583	15.1049	31.19	. Q . V	.	.	.	.

13.667	15.3232	31.69	.	Q	.	V	.	.	.
13.750	15.5451	32.22	.	Q	.	V	.	.	.
13.833	15.7708	32.78	.	Q	.	V	.	.	.
13.917	16.0006	33.36	.	Q	.	V	.	.	.
14.000	16.2346	33.98	.	Q	.	V	.	.	.
14.083	16.4735	34.69	.	Q	.	V	.	.	.
14.167	16.7190	35.64	.	Q	.	V	.	.	.
14.250	16.9733	36.93	.	Q	.	V	.	.	.
14.333	17.2381	38.45	.	Q	.	V	.	.	.
14.417	17.5138	40.04	.	Q	.	V	.	.	.
14.500	17.7989	41.39	.	Q	.	V	.	.	.
14.583	18.0922	42.59	.	Q	.	V	.	.	.
14.667	18.3934	43.74	.	Q	.	V	.	.	.
14.750	18.7026	44.89	.	Q	.	V	.	.	.
14.833	19.0200	46.08	.	Q	.	V	.	.	.
14.917	19.3463	47.38	.	Q	.	V	.	.	.
15.000	19.6823	48.79	.	Q	.	V	.	.	.
15.083	20.0290	50.33	.	Q	.	V	.	.	.
15.167	20.3872	52.01	.	Q	.	V	.	.	.
15.250	20.7583	53.89	.	Q	.	V	.	.	.
15.333	21.1439	55.98	.	Q	.	V	.	.	.
15.417	21.5444	58.16	.	Q	.	V	.	.	.
15.500	21.9571	59.91	.	Q	.	V	.	.	.
15.583	22.3778	61.09	.	Q	.	V	.	.	.
15.667	22.8058	62.15	.	Q	.	V	.	.	.
15.750	23.2478	64.18	.	Q	.	V	.	.	.
15.833	23.7220	68.85	.	Q	.	V	.	.	.
15.917	24.2545	77.32	.	Q	.	V	.	.	.
16.000	24.8890	92.14	.	Q	.	V	.	.	.
16.083	25.7643	127.09	.	Q	.	V	.	.	.
16.167	27.1025	194.30	.	Q	.	V	.	.	.
16.250	28.9590	269.56	.	Q	.	V	.	.	.
16.333	31.0739	307.09	.	Q	.	V	.	.	.
16.417	33.0701	289.84	.	Q	.	V	.	.	.
16.500	34.5190	210.38	.	Q	.	V	.	.	.
16.583	35.5246	146.01	.	Q	.	V	.	.	.
16.667	36.2638	107.34	.	Q	.	V	.	.	.
16.750	36.8341	82.80	.	Q	.	V	.	.	.
16.833	37.2963	67.11	.	Q	.	V	.	.	.
16.917	37.7193	61.42	.	Q	.	V	.	.	.
17.000	38.1116	56.97	.	Q	.	V	.	.	.
17.083	38.4663	51.49	.	Q	.	V	.	.	.
17.167	38.7896	46.95	.	Q	.	V	.	.	.
17.250	39.0880	43.33	.	Q	.	V	.	.	.
17.333	39.3672	40.53	.	Q	.	V	.	.	.
17.417	39.6290	38.02	.	Q	.	V	.	.	.
17.500	39.8769	35.99	.	Q	.	V	.	.	.
17.583	40.1135	34.35	.	Q	.	V	.	.	.
17.667	40.3406	32.99	.	Q	.	V	.	.	.
17.750	40.5598	31.82	.	Q	.	V	.	.	.
17.833	40.7718	30.79	.	Q	.	V	.	.	.
17.917	40.9775	29.86	.	Q	.	V	.	.	.
18.000	41.1772	29.00	.	Q	.	V	.	.	.
18.083	41.3709	28.13	.	Q	.	V	.	.	.
18.167	41.5567	26.97	.	Q	.	V	.	.	.
18.250	41.7317	25.41	.	Q	.	V	.	.	.
18.333	41.8942	23.59	.	Q	.	V	.	.	.
18.417	42.0443	21.80	.	Q	.	V	.	.	.

18.500	42.1856	20.51	.	Q	.	.	.	.	V	.
18.583	42.3207	19.61	.	Q	.	.	.	.	V	.
18.667	42.4511	18.94	.	Q	.	.	.	.	V	.
18.750	42.5779	18.41	.	Q	.	.	.	.	V	.
18.833	42.7017	17.98	.	Q	.	.	.	.	V	.
18.917	42.8228	17.57	.	Q	.	.	.	.	V	.
19.000	42.9411	17.19	.	Q	.	.	.	.	V	.
19.083	43.0571	16.84	.	Q	.	.	.	.	V	.
19.167	43.1708	16.51	.	Q	.	.	.	.	V	.
19.250	43.2824	16.21	.	Q	.	.	.	.	V	.
19.333	43.3920	15.92	.	Q	.	.	.	.	V	.
19.417	43.4997	15.64	.	Q	.	.	.	.	V	.
19.500	43.6056	15.37	.	Q	.	.	.	.	V	.
19.583	43.7097	15.12	.	Q	.	.	.	.	V	.
19.667	43.8122	14.87	.	Q	.	.	.	.	V	.
19.750	43.9130	14.64	.	Q	.	.	.	.	V	.
19.833	44.0123	14.42	.	Q	.	.	.	.	V	.
19.917	44.1101	14.20	.	Q	.	.	.	.	V	.
20.000	44.2065	13.99	.	Q	.	.	.	.	V	.
20.083	44.3014	13.79	.	Q	.	.	.	.	V	.
20.167	44.3951	13.60	.	Q	.	.	.	.	V	.
20.250	44.4875	13.42	.	Q	.	.	.	.	V	.
20.333	44.5787	13.24	.	Q	.	.	.	.	V	.
20.417	44.6686	13.06	.	Q	.	.	.	.	V	.
20.500	44.7575	12.90	.	Q	.	.	.	.	V	.
20.583	44.8451	12.73	.	Q	.	.	.	.	V	.
20.667	44.9318	12.58	.	Q	.	.	.	.	V	.
20.750	45.0173	12.42	.	Q	.	.	.	.	V	.
20.833	45.1019	12.28	.	Q	.	.	.	.	V	.
20.917	45.1855	12.13	.	Q	.	.	.	.	V	.
21.000	45.2681	12.00	.	Q	.	.	.	.	V	.
21.083	45.3498	11.86	.	Q	.	.	.	.	V	.
21.167	45.4306	11.73	.	Q	.	.	.	.	V	.
21.250	45.5105	11.60	.	Q	.	.	.	.	V	.
21.333	45.5896	11.48	.	Q	.	.	.	.	V	.
21.417	45.6678	11.36	.	Q	.	.	.	.	V	.
21.500	45.7452	11.24	.	Q	.	.	.	.	V	.
21.583	45.8219	11.13	.	Q	.	.	.	.	V	.
21.667	45.8978	11.02	.	Q	.	.	.	.	V	.
21.750	45.9729	10.91	.	Q	.	.	.	.	V	.
21.833	46.0473	10.80	.	Q	.	.	.	.	V	.
21.917	46.1210	10.70	.	Q	.	.	.	.	V	.
22.000	46.1940	10.60	.	Q	.	.	.	.	V	.
22.083	46.2664	10.50	.	Q	.	.	.	.	V	.
22.167	46.3381	10.41	.	Q	.	.	.	.	V	.
22.250	46.4091	10.31	.	Q	.	.	.	.	V	.
22.333	46.4795	10.22	.	Q	.	.	.	.	V	.
22.417	46.5493	10.13	.	Q	.	.	.	.	V	.
22.500	46.6185	10.05	.	Q	.	.	.	.	V	.
22.583	46.6871	9.96	.	Q	.	.	.	.	V	.
22.667	46.7551	9.88	.	Q	.	.	.	.	V	.
22.750	46.8226	9.80	.	Q	.	.	.	.	V	.
22.833	46.8895	9.72	.	Q	.	.	.	.	V	.
22.917	46.9559	9.64	.	Q	.	.	.	.	V	.
23.000	47.0218	9.56	.	Q	.	.	.	.	V	.
23.083	47.0871	9.49	.	Q	.	.	.	.	V	.
23.167	47.1519	9.41	.	Q	.	.	.	.	V	.
23.250	47.2163	9.34	.	Q	.	.	.	.	V	.

23.333	47.2801	9.27	Q	.	.	.	V.
23.417	47.3435	9.20	Q	.	.	.	V.
23.500	47.4064	9.13	Q	.	.	.	V.
23.583	47.4688	9.07	Q	.	.	.	V.
23.667	47.5308	9.00	Q	.	.	.	V.
23.750	47.5924	8.94	Q	.	.	.	V.
23.833	47.6535	8.87	Q	.	.	.	V.
23.917	47.7142	8.81	Q	.	.	.	V.
24.000	47.7745	8.75	Q	.	.	.	V.
24.083	47.8333	8.54	Q	.	.	.	V.
24.167	47.8871	7.82	Q	.	.	.	V.
24.250	47.9310	6.37	Q	.	.	.	V.
24.333	47.9618	4.46	Q	.	.	.	V.
24.417	47.9793	2.55	Q	.	.	.	V.
24.500	47.9885	1.34	Q	.	.	.	V.
24.583	47.9933	0.69	Q	.	.	.	V.
24.667	47.9956	0.34	Q	.	.	.	V.
24.750	47.9968	0.17	Q	.	.	.	V.
24.833	47.9976	0.12	Q	.	.	.	V.
24.917	47.9981	0.07	Q	.	.	.	V.
25.000	47.9983	0.03	Q	.	.	.	V.
25.083	47.9984	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1505.0
10%	260.0
20%	80.0
30%	45.0
40%	35.0
50%	25.0
60%	25.0
70%	15.0
80%	15.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #3)

WATERSHED AREA = 117.200 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.467 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.472

LOW LOSS FRACTION = 0.670
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.18
SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 0.41
SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 0.55
SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 0.92
SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 1.27
SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 2.12

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 17.844

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.020	14.456
2	3.795	39.338
3	10.455	94.394
4	20.774	146.255
5	32.681	168.777
6	47.688	212.705
7	62.374	208.159
8	74.698	174.673
9	83.121	119.393
10	88.946	82.558
11	92.760	54.053
12	95.426	37.795
13	97.063	23.204
14	98.095	14.629
15	98.445	4.961
16	98.780	4.741
17	99.114	4.742
18	99.449	4.741
19	99.783	4.741
20	100.000	3.072

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 13.0784
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 7.5692

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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q(CFS)	0.	12.5	25.0	37.5	50.0
0.083	0.0001	0.01	Q	.	.	.	.
0.167	0.0004	0.05	Q	.	.	.	.
0.250	0.0013	0.13	Q	.	.	.	.
0.333	0.0032	0.27	Q	.	.	.	.
0.417	0.0060	0.42	Q	.	.	.	.
0.500	0.0103	0.61	Q	.	.	.	.
0.583	0.0158	0.80	Q	.	.	.	.
0.667	0.0224	0.96	Q	.	.	.	.
0.750	0.0297	1.07	Q	.	.	.	.
0.833	0.0376	1.15	Q	.	.	.	.
0.917	0.0459	1.20	Q	.	.	.	.
1.000	0.0544	1.24	Q	.	.	.	.
1.083	0.0631	1.26	VQ	.	.	.	.
1.167	0.0720	1.28	VQ	.	.	.	.
1.250	0.0808	1.29	VQ	.	.	.	.
1.333	0.0898	1.30	VQ	.	.	.	.
1.417	0.0988	1.31	VQ	.	.	.	.
1.500	0.1079	1.32	VQ	.	.	.	.
1.583	0.1170	1.32	VQ	.	.	.	.
1.667	0.1262	1.33	VQ	.	.	.	.
1.750	0.1354	1.34	VQ	.	.	.	.
1.833	0.1446	1.34	VQ	.	.	.	.
1.917	0.1539	1.35	VQ	.	.	.	.
2.000	0.1632	1.35	VQ	.	.	.	.
2.083	0.1725	1.36	VQ	.	.	.	.
2.167	0.1819	1.36	VQ	.	.	.	.
2.250	0.1913	1.37	.Q	.	.	.	.
2.333	0.2007	1.37	.Q	.	.	.	.
2.417	0.2102	1.38	.Q	.	.	.	.
2.500	0.2197	1.38	.Q	.	.	.	.
2.583	0.2293	1.39	.Q	.	.	.	.
2.667	0.2389	1.39	.Q	.	.	.	.
2.750	0.2485	1.40	.Q	.	.	.	.
2.833	0.2582	1.40	.Q	.	.	.	.
2.917	0.2678	1.41	.Q	.	.	.	.
3.000	0.2776	1.41	.Q	.	.	.	.
3.083	0.2874	1.42	.Q	.	.	.	.
3.167	0.2972	1.42	.Q	.	.	.	.
3.250	0.3070	1.43	.Q	.	.	.	.
3.333	0.3169	1.44	.Q	.	.	.	.
3.417	0.3268	1.44	.Q	.	.	.	.
3.500	0.3368	1.45	.Q	.	.	.	.
3.583	0.3468	1.45	.Q	.	.	.	.
3.667	0.3568	1.46	.Q	.	.	.	.
3.750	0.3669	1.46	.Q	.	.	.	.
3.833	0.3771	1.47	.Q	.	.	.	.
3.917	0.3872	1.48	.QV	.	.	.	.

4.000	0.3974	1.48	.QV	.	.	.	.
4.083	0.4077	1.49	.QV	.	.	.	.
4.167	0.4180	1.50	.QV	.	.	.	.
4.250	0.4283	1.50	.QV	.	.	.	.
4.333	0.4387	1.51	.QV	.	.	.	.
4.417	0.4492	1.51	.QV	.	.	.	.
4.500	0.4596	1.52	.QV	.	.	.	.
4.583	0.4702	1.53	.QV	.	.	.	.
4.667	0.4807	1.53	.QV	.	.	.	.
4.750	0.4914	1.54	.QV	.	.	.	.
4.833	0.5020	1.55	.QV	.	.	.	.
4.917	0.5127	1.56	.QV	.	.	.	.
5.000	0.5235	1.56	.QV	.	.	.	.
5.083	0.5343	1.57	.QV	.	.	.	.
5.167	0.5452	1.58	.QV	.	.	.	.
5.250	0.5561	1.58	.QV	.	.	.	.
5.333	0.5670	1.59	.QV	.	.	.	.
5.417	0.5780	1.60	.Q V	.	.	.	.
5.500	0.5891	1.61	.Q V	.	.	.	.
5.583	0.6002	1.61	.Q V	.	.	.	.
5.667	0.6114	1.62	.Q V	.	.	.	.
5.750	0.6226	1.63	.Q V	.	.	.	.
5.833	0.6339	1.64	.Q V	.	.	.	.
5.917	0.6452	1.65	.Q V	.	.	.	.
6.000	0.6566	1.65	.Q V	.	.	.	.
6.083	0.6681	1.66	.Q V	.	.	.	.
6.167	0.6796	1.67	.Q V	.	.	.	.
6.250	0.6911	1.68	.Q V	.	.	.	.
6.333	0.7028	1.69	.Q V	.	.	.	.
6.417	0.7145	1.70	.Q V	.	.	.	.
6.500	0.7262	1.71	.Q V	.	.	.	.
6.583	0.7380	1.71	.Q V	.	.	.	.
6.667	0.7499	1.72	.Q V	.	.	.	.
6.750	0.7618	1.73	.Q V	.	.	.	.
6.833	0.7738	1.74	.Q V	.	.	.	.
6.917	0.7859	1.75	.Q V	.	.	.	.
7.000	0.7980	1.76	.Q V	.	.	.	.
7.083	0.8102	1.77	.Q V	.	.	.	.
7.167	0.8225	1.78	.Q V	.	.	.	.
7.250	0.8348	1.79	.Q V	.	.	.	.
7.333	0.8472	1.80	.Q V	.	.	.	.
7.417	0.8597	1.81	.Q V	.	.	.	.
7.500	0.8722	1.82	.Q V	.	.	.	.
7.583	0.8848	1.83	.Q V	.	.	.	.
7.667	0.8975	1.84	.Q V	.	.	.	.
7.750	0.9103	1.85	.Q V	.	.	.	.
7.833	0.9231	1.87	.Q V	.	.	.	.
7.917	0.9360	1.88	.Q V	.	.	.	.
8.000	0.9490	1.89	.Q V	.	.	.	.
8.083	0.9621	1.90	.Q V	.	.	.	.
8.167	0.9753	1.91	.Q V	.	.	.	.
8.250	0.9885	1.92	.Q V	.	.	.	.
8.333	1.0019	1.94	.Q V	.	.	.	.
8.417	1.0153	1.95	.Q V	.	.	.	.
8.500	1.0288	1.96	.Q V	.	.	.	.
8.583	1.0424	1.97	.Q V	.	.	.	.
8.667	1.0561	1.99	.Q V	.	.	.	.
8.750	1.0698	2.00	.Q V	.	.	.	.

8.833	1.0837	2.01	.Q	V	.	.	.	.
8.917	1.0977	2.03	.Q	V	.	.	.	.
9.000	1.1117	2.04	.Q	V	.	.	.	.
9.083	1.1259	2.06	.Q	V	.	.	.	.
9.167	1.1401	2.07	.Q	V	.	.	.	.
9.250	1.1545	2.08	.Q	V	.	.	.	.
9.333	1.1690	2.10	.Q	V	.	.	.	.
9.417	1.1835	2.12	.Q	V	.	.	.	.
9.500	1.1982	2.13	.Q	V	.	.	.	.
9.583	1.2130	2.15	.Q	V	.	.	.	.
9.667	1.2279	2.16	.Q	V	.	.	.	.
9.750	1.2429	2.18	.Q	V	.	.	.	.
9.833	1.2580	2.20	.Q	V	.	.	.	.
9.917	1.2733	2.21	.Q	V	.	.	.	.
10.000	1.2887	2.23	.Q	V	.	.	.	.
10.083	1.3042	2.25	.Q	V	.	.	.	.
10.167	1.3198	2.27	.Q	V	.	.	.	.
10.250	1.3355	2.29	.Q	V	.	.	.	.
10.333	1.3514	2.31	.Q	V	.	.	.	.
10.417	1.3675	2.33	.Q	V	.	.	.	.
10.500	1.3836	2.35	.Q	V	.	.	.	.
10.583	1.3999	2.37	.Q	V	.	.	.	.
10.667	1.4164	2.39	.Q	V	.	.	.	.
10.750	1.4330	2.41	.Q	V	.	.	.	.
10.833	1.4497	2.43	.Q	V	.	.	.	.
10.917	1.4666	2.45	.Q	V	.	.	.	.
11.000	1.4837	2.48	.Q	V	.	.	.	.
11.083	1.5009	2.50	.Q	V	.	.	.	.
11.167	1.5183	2.53	.Q	V	.	.	.	.
11.250	1.5359	2.55	.Q	V	.	.	.	.
11.333	1.5536	2.58	.Q	V	.	.	.	.
11.417	1.5715	2.60	.Q	V	.	.	.	.
11.500	1.5896	2.63	.Q	V	.	.	.	.
11.583	1.6079	2.66	.Q	V	.	.	.	.
11.667	1.6264	2.69	.Q	V	.	.	.	.
11.750	1.6451	2.71	.Q	V	.	.	.	.
11.833	1.6640	2.74	.Q	V	.	.	.	.
11.917	1.6831	2.78	.Q	V	.	.	.	.
12.000	1.7025	2.81	.Q	V	.	.	.	.
12.083	1.7221	2.85	.Q	V	.	.	.	.
12.167	1.7421	2.91	.Q	V	.	.	.	.
12.250	1.7627	3.00	.Q	V	.	.	.	.
12.333	1.7842	3.12	.Q	V	.	.	.	.
12.417	1.8066	3.25	.Q	V	.	.	.	.
12.500	1.8301	3.42	.Q	V	.	.	.	.
12.583	1.8548	3.58	.Q	V	.	.	.	.
12.667	1.8804	3.72	.Q	V	.	.	.	.
12.750	1.9069	3.84	.Q	V	.	.	.	.
12.833	1.9340	3.93	.Q	V	.	.	.	.
12.917	1.9616	4.01	.Q	V	.	.	.	.
13.000	1.9898	4.09	.Q	V	.	.	.	.
13.083	2.0183	4.15	.Q	V	.	.	.	.
13.167	2.0474	4.21	.Q	V	.	.	.	.
13.250	2.0768	4.27	.Q	V	.	.	.	.
13.333	2.1066	4.33	.Q	.V	.	.	.	.
13.417	2.1369	4.40	.Q	.V	.	.	.	.
13.500	2.1677	4.46	.Q	.V	.	.	.	.
13.583	2.1989	4.53	.Q	.V	.	.	.	.

13.667	2.2306	4.60	.Q	.V	.	.	.	.
13.750	2.2628	4.68	.Q	.V	.	.	.	.
13.833	2.2955	4.75	.Q	.V	.	.	.	.
13.917	2.3288	4.83	.Q	.V	.	.	.	.
14.000	2.3627	4.92	.Q	.V	.	.	.	.
14.083	2.3972	5.01	.Q	.V	.	.	.	.
14.167	2.4324	5.12	.Q	.V	.	.	.	.
14.250	2.4685	5.25	.Q	.V	.	.	.	.
14.333	2.5057	5.40	.Q	.V	.	.	.	.
14.417	2.5441	5.57	.Q	.V	.	.	.	.
14.500	2.5838	5.77	.Q	.V	.	.	.	.
14.583	2.6249	5.96	.Q	.V	.	.	.	.
14.667	2.6673	6.16	.Q	.V	.	.	.	.
14.750	2.7110	6.35	.Q	.V	.	.	.	.
14.833	2.7560	6.53	.Q	.V	.	.	.	.
14.917	2.8022	6.71	.Q	.V	.	.	.	.
15.000	2.8498	6.90	.Q	.V	.	.	.	.
15.083	2.8987	7.10	.Q	.V	.	.	.	.
15.167	2.9491	7.32	.Q	.V	.	.	.	.
15.250	3.0012	7.56	.Q	.V	.	.	.	.
15.333	3.0550	7.82	.Q	.V	.	.	.	.
15.417	3.1107	8.09	.Q	.V	.	.	.	.
15.500	3.1683	8.36	.Q	.V	.	.	.	.
15.583	3.2276	8.61	.Q	.V	.	.	.	.
15.667	3.2886	8.86	.Q	.V	.	.	.	.
15.750	3.3517	9.16	.Q	.V	.	.	.	.
15.833	3.4174	9.54	.Q	.V	.	.	.	.
15.917	3.4873	10.14	.Q	.V	.	.	.	.
16.000	3.5644	11.20	.Q	.V	.	.	.	.
16.083	3.6633	14.37	.Q	.V	.	.	.	.
16.167	3.7960	19.26	.	.Q	.V	.	.	.
16.250	3.9855	27.51	.	.	.VQ	.	.	.
16.333	4.2259	34.91	.	.	.V	.Q	.	.
16.417	4.4908	38.47	.	.	.V	.Q	.	.
16.500	4.7894	43.35	.	.	.V	.Q	.	.
16.583	5.0769	41.75	.	.	.V	.Q	.	.
16.667	5.3258	36.13	.	.	.Q	.V	.	.
16.750	5.5182	27.94	.	.	.Q	.V	.	.
16.833	5.6701	22.06	.	.	.Q	.V	.	.
16.917	5.7903	17.45	.	.Q	.	.V	.	.
17.000	5.8899	14.46	.	.Q	.	.V	.	.
17.083	5.9715	11.85	.	.Q	.	.V	.	.
17.167	6.0408	10.06	.	.Q	.	.V	.	.
17.250	6.0983	8.34	.	.Q	.	.V	.	.
17.333	6.1520	7.80	.	.Q	.	.V	.	.
17.417	6.2027	7.37	.	.Q	.	.V	.	.
17.500	6.2506	6.95	.	.Q	.	.V	.	.
17.583	6.2957	6.55	.	.Q	.	.V	.	.
17.667	6.3369	5.98	.	.Q	.	.V	.	.
17.750	6.3737	5.34	.	.Q	.	.V	.	.
17.833	6.4088	5.09	.	.Q	.	.V	.	.
17.917	6.4425	4.89	.	.Q	.	.V	.	.
18.000	6.4750	4.72	.	.Q	.	.V	.	.
18.083	6.5063	4.55	.	.Q	.	.V	.	.
18.167	6.5366	4.39	.	.Q	.	.V	.	.
18.250	6.5656	4.21	.	.Q	.	.V	.	.
18.333	6.5932	4.01	.	.Q	.	.V	.	.
18.417	6.6194	3.81	.	.Q	.	.V	.	.

18.500	6.6441	3.59	.Q	.	.	.	V	.
18.583	6.6673	3.38	.Q	.	.	.	V	.
18.667	6.6893	3.19	.Q	.	.	.	V	.
18.750	6.7103	3.05	.Q	.	.	.	V	.
18.833	6.7305	2.93	.Q	.	.	.	V	.
18.917	6.7500	2.83	.Q	.	.	.	V	.
19.000	6.7689	2.75	.Q	.	.	.	V	.
19.083	6.7873	2.68	.Q	.	.	.	V	.
19.167	6.8053	2.61	.Q	.	.	.	V	.
19.250	6.8229	2.56	.Q	.	.	.	V	.
19.333	6.8402	2.51	.Q	.	.	.	V	.
19.417	6.8571	2.46	.Q	.	.	.	V	.
19.500	6.8737	2.41	.Q	.	.	.	V	.
19.583	6.8900	2.36	.Q	.	.	.	V	.
19.667	6.9060	2.32	.Q	.	.	.	V	.
19.750	6.9217	2.28	.Q	.	.	.	V	.
19.833	6.9371	2.24	.Q	.	.	.	V	.
19.917	6.9523	2.21	.Q	.	.	.	V	.
20.000	6.9673	2.17	.Q	.	.	.	V	.
20.083	6.9821	2.14	.Q	.	.	.	V	.
20.167	6.9966	2.11	.Q	.	.	.	V	.
20.250	7.0109	2.08	.Q	.	.	.	V	.
20.333	7.0250	2.05	.Q	.	.	.	V	.
20.417	7.0390	2.02	.Q	.	.	.	V	.
20.500	7.0527	1.99	.Q	.	.	.	V	.
20.583	7.0663	1.97	.Q	.	.	.	V	.
20.667	7.0796	1.94	.Q	.	.	.	V	.
20.750	7.0929	1.92	.Q	.	.	.	V	.
20.833	7.1059	1.89	.Q	.	.	.	V	.
20.917	7.1188	1.87	.Q	.	.	.	V	.
21.000	7.1315	1.85	.Q	.	.	.	V	.
21.083	7.1441	1.83	.Q	.	.	.	V	.
21.167	7.1566	1.81	.Q	.	.	.	V	.
21.250	7.1689	1.79	.Q	.	.	.	V	.
21.333	7.1810	1.77	.Q	.	.	.	V	.
21.417	7.1931	1.75	.Q	.	.	.	V	.
21.500	7.2050	1.73	.Q	.	.	.	V	.
21.583	7.2168	1.71	.Q	.	.	.	V	.
21.667	7.2284	1.69	.Q	.	.	.	V	.
21.750	7.2400	1.68	.Q	.	.	.	V	.
21.833	7.2514	1.66	.Q	.	.	.	V	.
21.917	7.2627	1.64	.Q	.	.	.	V	.
22.000	7.2739	1.63	.Q	.	.	.	V	.
22.083	7.2850	1.61	.Q	.	.	.	V	.
22.167	7.2960	1.60	.Q	.	.	.	V	.
22.250	7.3069	1.58	.Q	.	.	.	V	.
22.333	7.3176	1.57	.Q	.	.	.	V	.
22.417	7.3283	1.55	.Q	.	.	.	V	.
22.500	7.3389	1.54	.Q	.	.	.	V	.
22.583	7.3494	1.52	.Q	.	.	.	V	.
22.667	7.3598	1.51	.Q	.	.	.	V	.
22.750	7.3702	1.50	.Q	.	.	.	V	.
22.833	7.3804	1.49	.Q	.	.	.	V	.
22.917	7.3905	1.47	.Q	.	.	.	V	.
23.000	7.4006	1.46	.Q	.	.	.	V	.
23.083	7.4106	1.45	.Q	.	.	.	V	.
23.167	7.4205	1.44	.Q	.	.	.	V	.
23.250	7.4303	1.43	.Q	.	.	.	V	.

23.333	7.4401	1.42	.Q	.	.	.	V	.
23.417	7.4498	1.41	.Q	.	.	.	V	.
23.500	7.4594	1.39	.Q	.	.	.	V	.
23.583	7.4689	1.38	.Q	.	.	.	V	.
23.667	7.4784	1.37	.Q	.	.	.	V	.
23.750	7.4878	1.36	.Q	.	.	.	V	.
23.833	7.4971	1.35	.Q	.	.	.	V	.
23.917	7.5063	1.34	.Q	.	.	.	V	.
24.000	7.5155	1.33	.Q	.	.	.	V	.
24.083	7.5246	1.31	.Q	.	.	.	V	.
24.167	7.5333	1.27	.Q	.	.	.	V	.
24.250	7.5414	1.17	Q	.	.	.	V	.
24.333	7.5485	1.04	Q	.	.	.	V	.
24.417	7.5546	0.88	Q	.	.	.	V	.
24.500	7.5592	0.68	Q	.	.	.	V	.
24.583	7.5626	0.49	Q	.	.	.	V	.
24.667	7.5649	0.33	Q	.	.	.	V	.
24.750	7.5664	0.22	Q	.	.	.	V	.
24.833	7.5674	0.14	Q	.	.	.	V	.
24.917	7.5680	0.09	Q	.	.	.	V	.
25.000	7.5684	0.06	Q	.	.	.	V	.
25.083	7.5687	0.04	Q	.	.	.	V	.
25.167	7.5688	0.02	Q	.	.	.	V	.
25.250	7.5690	0.02	Q	.	.	.	V	.
25.333	7.5691	0.02	Q	.	.	.	V	.
25.417	7.5692	0.01	Q	.	.	.	V	.
25.500	7.5692	0.01	Q	.	.	.	V	.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1530.0
10%	290.0
20%	95.0
30%	60.0
40%	50.0
50%	40.0
60%	35.0
70%	25.0
80%	25.0
90%	10.0

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

>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<<
 =====

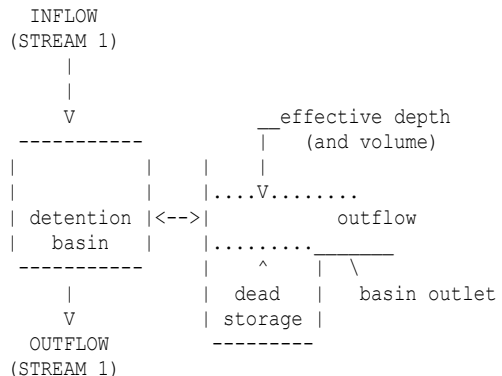
 FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 7

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

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FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 3.1
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>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<
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ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
 THROUGH A FLOW-THROUGH DETENTION BASIN
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
 DEAD STORAGE (AF) = 0.000
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

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

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MODIFIED-PULS BASIN ROUTING MODEL RESULTS (5-MINUTE COMPUTATION INTERVALS):
(Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
MEAN OUTFLOW is the average value during the unit interval.)
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CLOCK TIME (HRS)	DEAD-STORAGE FILLED (AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH (FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME (AF)
0.083	0.000	0.38	0.00	0.00	0.0	0.003
0.167	0.000	1.96	0.00	0.01	0.0	0.016
0.250	0.000	5.44	0.00	0.03	0.0	0.054
0.333	0.000	10.08	0.00	0.06	0.0	0.123
0.417	0.000	15.33	0.00	0.11	0.0	0.229
0.500	0.000	19.37	0.00	0.18	0.0	0.362
0.583	0.000	21.89	0.00	0.26	0.0	0.513
0.667	0.000	23.39	0.00	0.34	0.0	0.674
0.750	0.000	24.29	0.00	0.42	0.0	0.841
0.833	0.000	24.79	0.00	0.51	0.0	1.012
0.917	0.000	25.07	0.00	0.59	0.0	1.184
1.000	0.000	25.30	0.00	0.68	0.0	1.359
1.083	0.000	25.50	0.00	0.77	0.0	1.534
1.167	0.000	25.66	0.00	0.86	0.0	1.711
1.250	0.000	25.79	0.00	0.94	0.0	1.888
1.333	0.000	25.89	0.00	1.02	0.0	2.067
1.417	0.000	25.98	0.00	1.06	0.0	2.245
1.500	0.000	26.08	0.00	1.11	0.0	2.425
1.583	0.000	26.18	0.00	1.15	0.0	2.605
1.667	0.000	26.27	0.00	1.20	0.0	2.786
1.750	0.000	26.37	0.00	1.24	0.0	2.967
1.833	0.000	26.46	0.00	1.29	0.0	3.150
1.917	0.000	26.56	0.00	1.33	0.0	3.332
2.000	0.000	26.65	0.00	1.38	0.0	3.516
2.083	0.000	26.75	0.00	1.42	0.0	3.700
2.167	0.000	26.85	0.00	1.47	0.0	3.885
2.250	0.000	26.95	0.00	1.52	0.0	4.070
2.333	0.000	27.05	0.00	1.56	0.0	4.256
2.417	0.000	27.15	0.00	1.61	0.0	4.443
2.500	0.000	27.25	0.00	1.66	0.0	4.631
2.583	0.000	27.36	0.00	1.70	0.0	4.819
2.667	0.000	27.46	0.00	1.75	0.0	5.008
2.750	0.000	27.56	0.00	1.80	0.0	5.198
2.833	0.000	27.67	0.00	1.85	0.0	5.388
2.917	0.000	27.78	0.00	1.89	0.0	5.579
3.000	0.000	27.89	0.00	1.94	0.0	5.771
3.083	0.000	28.00	0.00	1.99	0.0	5.964
3.167	0.000	28.11	0.00	2.02	0.0	6.157
3.250	0.000	28.22	0.00	2.05	0.0	6.351
3.333	0.000	28.33	0.00	2.08	0.0	6.546
3.417	0.000	28.45	0.00	2.11	0.0	6.742
3.500	0.000	28.56	0.00	2.13	0.0	6.939
3.583	0.000	28.68	0.00	2.16	0.0	7.136
3.667	0.000	28.79	0.00	2.19	0.0	7.334
3.750	0.000	28.91	0.00	2.22	0.0	7.533

3.833	0.000	29.03	0.00	2.25	0.0	7.733
3.917	0.000	29.16	0.00	2.28	0.0	7.934
4.000	0.000	29.28	0.00	2.31	0.0	8.135
4.083	0.000	29.40	0.00	2.33	0.0	8.337
4.167	0.000	29.53	0.00	2.36	0.0	8.541
4.250	0.000	29.66	0.00	2.39	0.0	8.745
4.333	0.000	29.78	0.00	2.42	0.0	8.950
4.417	0.000	29.91	0.00	2.45	0.0	9.155
4.500	0.000	30.05	0.00	2.48	0.0	9.362
4.583	0.000	30.18	0.00	2.51	0.0	9.570
4.667	0.000	30.31	0.00	2.54	0.0	9.778
4.750	0.000	30.45	0.00	2.57	0.0	9.988
4.833	0.000	30.59	0.00	2.60	0.0	10.198
4.917	0.000	30.73	0.00	2.63	0.0	10.410
5.000	0.000	30.87	0.00	2.66	0.0	10.622
5.083	0.000	31.01	0.00	2.69	0.0	10.835
5.167	0.000	31.15	0.00	2.72	0.0	11.050
5.250	0.000	31.30	0.00	2.75	0.0	11.265
5.333	0.000	31.45	0.00	2.78	0.0	11.482
5.417	0.000	31.60	0.00	2.81	0.0	11.699
5.500	0.000	31.75	0.00	2.85	0.0	11.917
5.583	0.000	31.90	0.00	2.88	0.0	12.137
5.667	0.000	32.06	0.00	2.91	0.0	12.357
5.750	0.000	32.22	0.00	2.94	0.0	12.579
5.833	0.000	32.37	0.00	2.97	0.0	12.802
5.917	0.000	32.54	0.00	3.00	0.0	13.026
6.000	0.000	32.70	0.00	3.03	0.0	13.251
6.083	0.000	32.87	0.00	3.06	0.0	13.477
6.167	0.000	33.03	0.00	3.09	0.0	13.704
6.250	0.000	33.20	0.00	3.12	0.0	13.933
6.333	0.000	33.38	0.00	3.15	0.0	14.162
6.417	0.000	33.55	0.00	3.17	0.0	14.393
6.500	0.000	33.73	0.00	3.20	0.0	14.625
6.583	0.000	33.91	0.00	3.23	0.0	14.858
6.667	0.000	34.09	0.00	3.26	0.0	15.093
6.750	0.000	34.27	0.00	3.29	0.0	15.329
6.833	0.000	34.46	0.00	3.32	0.0	15.566
6.917	0.000	34.65	0.00	3.35	0.0	15.804
7.000	0.000	34.84	0.00	3.38	0.0	16.044
7.083	0.000	35.04	0.00	3.41	0.0	16.285
7.167	0.000	35.24	0.00	3.44	0.0	16.527
7.250	0.000	35.44	0.00	3.47	0.0	16.771
7.333	0.000	35.64	0.00	3.50	0.0	17.016
7.417	0.000	35.85	0.00	3.53	0.0	17.263
7.500	0.000	36.06	0.00	3.56	0.0	17.511
7.583	0.000	36.27	0.00	3.60	0.0	17.761
7.667	0.000	36.49	0.00	3.63	0.0	18.012
7.750	0.000	36.71	0.00	3.66	0.0	18.264
7.833	0.000	36.93	0.00	3.69	0.0	18.518
7.917	0.000	37.16	0.00	3.72	0.0	18.774
8.000	0.000	37.39	0.00	3.75	0.0	19.031
8.083	0.000	37.63	0.00	3.79	0.0	19.290
8.167	0.000	37.87	0.00	3.82	0.0	19.551
8.250	0.000	38.11	0.00	3.85	0.0	19.813
8.333	0.000	38.36	0.00	3.88	0.0	20.077
8.417	0.000	38.61	0.00	3.92	0.0	20.342
8.500	0.000	38.86	0.00	3.95	0.0	20.610
8.583	0.000	39.12	0.00	3.98	0.0	20.879

8.667	0.000	39.39	0.00	4.02	0.0	21.150
8.750	0.000	39.66	0.00	4.05	0.0	21.422
8.833	0.000	39.93	0.00	4.08	0.0	21.697
8.917	0.000	40.21	0.00	4.11	0.0	21.974
9.000	0.000	40.49	0.00	4.14	0.0	22.252
9.083	0.000	40.78	0.00	4.17	0.0	22.533
9.167	0.000	41.08	0.00	4.20	0.0	22.815
9.250	0.000	41.38	0.00	4.23	0.0	23.100
9.333	0.000	41.68	0.00	4.27	0.0	23.387
9.417	0.000	41.99	0.00	4.30	0.0	23.676
9.500	0.000	42.31	0.00	4.33	0.0	23.967
9.583	0.000	42.64	0.00	4.36	0.0	24.260
9.667	0.000	42.97	0.00	4.40	0.0	24.556
9.750	0.000	43.30	0.00	4.43	0.0	24.854
9.833	0.000	43.65	0.00	4.46	0.0	25.154
9.917	0.000	44.00	0.00	4.50	0.0	25.457
10.000	0.000	44.36	0.00	4.53	0.0	25.762
10.083	0.000	44.73	0.00	4.56	0.1	26.069
10.167	0.000	45.10	0.00	4.60	0.1	26.380
10.250	0.000	45.48	0.00	4.63	0.1	26.693
10.333	0.000	45.87	0.00	4.67	0.1	27.008
10.417	0.000	46.28	0.00	4.70	0.1	27.326
10.500	0.000	46.68	0.00	4.74	0.1	27.648
10.583	0.000	47.10	0.00	4.77	0.1	27.972
10.667	0.000	47.53	0.00	4.81	0.1	28.299
10.750	0.000	47.97	0.00	4.85	0.1	28.629
10.833	0.000	48.42	0.00	4.88	0.1	28.962
10.917	0.000	48.88	0.00	4.92	0.1	29.298
11.000	0.000	49.35	0.00	4.96	0.1	29.638
11.083	0.000	49.84	0.00	5.00	0.1	29.980
11.167	0.000	50.33	0.00	5.03	0.1	30.327
11.250	0.000	50.85	0.00	5.06	0.1	30.676
11.333	0.000	51.37	0.00	5.09	0.1	31.030
11.417	0.000	51.91	0.00	5.13	0.1	31.387
11.500	0.000	52.46	0.00	5.16	0.1	31.748
11.583	0.000	53.03	0.00	5.19	0.1	32.113
11.667	0.000	53.61	0.00	5.23	0.1	32.481
11.750	0.000	54.21	0.00	5.26	0.1	32.854
11.833	0.000	54.83	0.00	5.29	0.1	33.232
11.917	0.000	55.47	0.00	5.33	0.1	33.613
12.000	0.000	56.12	0.00	5.36	0.1	33.999
12.083	0.000	57.06	0.00	5.40	0.1	34.392
12.167	0.000	58.77	0.00	5.44	0.1	34.796
12.250	0.000	61.76	0.00	5.47	0.1	35.221
12.333	0.000	65.51	0.00	5.52	0.1	35.672
12.417	0.000	69.69	0.00	5.56	0.1	36.151
12.500	0.000	73.10	0.00	5.60	0.1	36.654
12.583	0.000	75.56	0.00	5.65	0.1	37.174
12.667	0.000	77.39	0.00	5.70	0.1	37.707
12.750	0.000	78.86	0.00	5.75	0.1	38.250
12.833	0.000	80.10	0.00	5.80	0.1	38.801
12.917	0.000	81.24	0.00	5.85	0.1	39.360
13.000	0.000	82.38	0.00	5.90	0.1	39.927
13.083	0.000	83.55	0.00	5.95	0.1	40.502
13.167	0.000	84.72	0.00	6.01	0.3	41.083
13.250	0.000	85.93	0.00	6.06	2.0	41.661
13.333	0.000	87.15	0.00	6.10	4.9	42.228
13.417	0.000	88.44	0.00	6.15	7.8	42.783

13.500	0.000	89.77	0.00	6.19	10.7	43.327
13.583	0.000	91.17	0.00	6.24	13.5	43.863
13.667	0.000	92.62	0.00	6.28	16.2	44.389
13.750	0.000	94.16	0.00	6.33	18.9	44.907
13.833	0.000	95.75	0.00	6.37	21.6	45.418
13.917	0.000	97.45	0.00	6.41	24.2	45.923
14.000	0.000	99.21	0.00	6.45	26.8	46.422
14.083	0.000	101.25	0.00	6.49	29.3	46.917
14.167	0.000	103.84	0.00	6.53	31.9	47.413
14.250	0.000	107.34	0.00	6.58	34.5	47.915
14.333	0.000	111.40	0.00	6.62	37.1	48.427
14.417	0.000	115.87	0.00	6.66	39.7	48.951
14.500	0.000	119.97	0.00	6.71	42.5	49.485
14.583	0.000	123.67	0.00	6.75	45.3	50.025
14.667	0.000	127.11	0.00	6.80	48.0	50.569
14.750	0.000	130.57	0.00	6.84	50.9	51.118
14.833	0.000	134.07	0.00	6.89	53.7	51.672
14.917	0.000	137.81	0.00	6.94	56.6	52.231
15.000	0.000	141.80	0.00	6.98	59.5	52.798
15.083	0.000	146.21	0.00	7.03	64.5	53.361
15.167	0.000	150.99	0.00	7.07	72.5	53.901
15.250	0.000	156.34	0.00	7.11	81.4	54.417
15.333	0.000	162.23	0.00	7.15	89.8	54.916
15.417	0.000	168.42	0.00	7.18	98.0	55.401
15.500	0.000	173.75	0.00	7.22	106.0	55.868
15.583	0.000	177.68	0.00	7.25	113.6	56.309
15.667	0.000	181.41	0.00	7.29	120.7	56.727
15.750	0.000	187.01	0.00	7.32	127.6	57.136
15.833	0.000	198.48	0.00	7.35	134.7	57.575
15.917	0.000	220.15	0.00	7.39	142.8	58.108
16.000	0.000	257.64	0.00	7.45	153.3	58.827
16.083	0.000	344.71	0.00	7.54	169.3	60.035
16.167	0.000	500.25	0.00	7.70	196.9	62.124
16.250	0.000	690.93	0.00	7.94	240.2	65.228
16.333	0.000	792.66	0.00	8.20	306.6	68.576
16.417	0.000	802.01	0.00	8.42	385.1	71.447
16.500	0.000	654.87	0.00	8.53	442.5	72.909
16.583	0.000	486.68	0.00	8.54	463.9	73.066
16.667	0.000	364.91	0.00	8.49	457.5	72.428
16.750	0.000	284.91	0.00	8.41	435.4	71.392
16.833	0.000	229.87	0.00	8.32	405.7	70.181
16.917	0.000	195.18	0.00	8.23	373.4	68.954
17.000	0.000	177.08	0.00	8.14	342.1	67.817
17.083	0.000	161.97	0.00	8.06	313.3	66.775
17.167	0.000	148.51	0.00	7.99	287.7	65.816
17.250	0.000	135.01	0.00	7.92	268.3	64.898
17.333	0.000	124.81	0.00	7.85	253.2	64.014
17.417	0.000	116.27	0.00	7.78	238.8	63.170
17.500	0.000	109.73	0.00	7.72	225.1	62.375
17.583	0.000	104.37	0.00	7.66	212.3	61.632
17.667	0.000	99.69	0.00	7.61	200.3	60.939
17.750	0.000	95.52	0.00	7.56	189.1	60.294
17.833	0.000	92.22	0.00	7.52	178.8	59.698
17.917	0.000	89.30	0.00	7.47	169.2	59.148
18.000	0.000	86.65	0.00	7.43	160.4	58.640
18.083	0.000	83.98	0.00	7.40	152.2	58.170
18.167	0.000	80.73	0.00	7.36	144.6	57.730
18.250	0.000	76.44	0.00	7.33	137.4	57.310

18.333	0.000	71.57	0.00	7.30	130.5	56.904
18.417	0.000	66.46	0.00	7.27	123.9	56.508
18.500	0.000	62.29	0.00	7.24	117.4	56.129
18.583	0.000	59.22	0.00	7.21	111.2	55.771
18.667	0.000	56.93	0.00	7.19	105.5	55.436
18.750	0.000	55.11	0.00	7.16	100.1	55.127
18.833	0.000	53.63	0.00	7.14	95.1	54.841
18.917	0.000	52.36	0.00	7.12	90.5	54.578
19.000	0.000	51.19	0.00	7.10	86.3	54.336
19.083	0.000	50.10	0.00	7.09	82.4	54.113
19.167	0.000	49.08	0.00	7.07	78.9	53.908
19.250	0.000	48.13	0.00	7.06	75.6	53.719
19.333	0.000	47.25	0.00	7.04	72.5	53.545
19.417	0.000	46.41	0.00	7.03	69.8	53.384
19.500	0.000	45.61	0.00	7.02	67.2	53.236
19.583	0.000	44.84	0.00	7.01	64.8	53.098
19.667	0.000	44.11	0.00	7.00	62.7	52.970
19.750	0.000	43.40	0.00	6.99	61.5	52.845
19.833	0.000	42.73	0.00	6.98	60.9	52.720
19.917	0.000	42.08	0.00	6.97	60.2	52.595
20.000	0.000	41.46	0.00	6.96	59.6	52.470
20.083	0.000	40.86	0.00	6.95	58.9	52.346
20.167	0.000	40.29	0.00	6.94	58.3	52.222
20.250	0.000	39.73	0.00	6.92	57.7	52.098
20.333	0.000	39.19	0.00	6.91	57.0	51.975
20.417	0.000	38.68	0.00	6.90	56.4	51.853
20.500	0.000	38.18	0.00	6.89	55.8	51.732
20.583	0.000	37.69	0.00	6.88	55.1	51.612
20.667	0.000	37.22	0.00	6.87	54.5	51.493
20.750	0.000	36.77	0.00	6.86	53.9	51.375
20.833	0.000	36.33	0.00	6.85	53.3	51.258
20.917	0.000	35.90	0.00	6.85	52.7	51.142
21.000	0.000	35.49	0.00	6.84	52.1	51.027
21.083	0.000	35.09	0.00	6.83	51.5	50.914
21.167	0.000	34.70	0.00	6.82	50.9	50.802
21.250	0.000	34.32	0.00	6.81	50.4	50.692
21.333	0.000	33.95	0.00	6.80	49.8	50.583
21.417	0.000	33.59	0.00	6.79	49.2	50.475
21.500	0.000	33.24	0.00	6.78	48.7	50.368
21.583	0.000	32.90	0.00	6.77	48.1	50.263
21.667	0.000	32.57	0.00	6.76	47.6	50.160
21.750	0.000	32.25	0.00	6.75	47.1	50.058
21.833	0.000	31.94	0.00	6.75	46.6	49.957
21.917	0.000	31.63	0.00	6.74	46.0	49.858
22.000	0.000	31.33	0.00	6.73	45.5	49.760
22.083	0.000	31.04	0.00	6.72	45.0	49.664
22.167	0.000	30.76	0.00	6.71	44.5	49.569
22.250	0.000	30.48	0.00	6.71	44.0	49.475
22.333	0.000	30.21	0.00	6.70	43.6	49.383
22.417	0.000	29.94	0.00	6.69	43.1	49.293
22.500	0.000	29.68	0.00	6.68	42.6	49.203
22.583	0.000	29.43	0.00	6.68	42.2	49.116
22.667	0.000	29.18	0.00	6.67	41.7	49.029
22.750	0.000	28.94	0.00	6.66	41.3	48.944
22.833	0.000	28.70	0.00	6.66	40.9	48.860
22.917	0.000	28.47	0.00	6.65	40.4	48.778
23.000	0.000	28.24	0.00	6.64	40.0	48.697
23.083	0.000	28.02	0.00	6.63	39.6	48.617

23.167	0.000	27.80	0.00	6.63	39.2	48.539
23.250	0.000	27.58	0.00	6.62	38.8	48.462
23.333	0.000	27.37	0.00	6.62	38.4	48.386
23.417	0.000	27.17	0.00	6.61	38.0	48.312
23.500	0.000	26.97	0.00	6.60	37.6	48.238
23.583	0.000	26.77	0.00	6.60	37.2	48.166
23.667	0.000	26.58	0.00	6.59	36.9	48.095
23.750	0.000	26.38	0.00	6.59	36.5	48.026
23.833	0.000	26.20	0.00	6.58	36.1	47.957
23.917	0.000	26.01	0.00	6.57	35.8	47.890
24.000	0.000	25.83	0.00	6.57	35.5	47.823
24.083	0.000	25.27	0.00	6.56	35.1	47.756
24.167	0.000	23.53	0.00	6.56	34.7	47.679
24.250	0.000	19.90	0.00	6.55	34.3	47.580
24.333	0.000	15.16	0.00	6.54	33.7	47.452
24.417	0.000	9.84	0.00	6.52	33.0	47.293
24.500	0.000	5.80	0.00	6.51	32.1	47.112
24.583	0.000	3.31	0.00	6.49	31.1	46.920
24.667	0.000	1.86	0.00	6.48	30.1	46.726
24.750	0.000	1.03	0.00	6.46	29.1	46.532
24.833	0.000	0.60	0.00	6.45	28.1	46.343
24.917	0.000	0.41	0.00	6.43	27.2	46.158
25.000	0.000	0.26	0.00	6.41	26.2	45.979
25.083	0.000	0.14	0.00	6.40	25.3	45.806
25.167	0.000	0.06	0.00	6.39	24.4	45.638
25.250	0.000	0.03	0.00	6.37	23.6	45.476
25.333	0.000	0.02	0.00	6.36	22.8	45.319
25.417	0.000	0.01	0.00	6.35	22.0	45.168
25.500	0.000	0.01	0.00	6.34	21.2	45.022
25.583	0.000	0.00	0.00	6.32	20.5	44.881
25.667	0.000	0.00	0.00	6.31	19.7	44.745
25.750	0.000	0.00	0.00	6.30	19.1	44.614
25.833	0.000	0.00	0.00	6.29	18.4	44.487
25.917	0.000	0.00	0.00	6.28	17.7	44.365
26.000	0.000	0.00	0.00	6.27	17.1	44.247
26.083	0.000	0.00	0.00	6.26	16.5	44.133
26.167	0.000	0.00	0.00	6.25	16.0	44.023
26.250	0.000	0.00	0.00	6.24	15.4	43.917
26.333	0.000	0.00	0.00	6.23	14.9	43.815
26.417	0.000	0.00	0.00	6.23	14.3	43.716
26.500	0.000	0.00	0.00	6.22	13.8	43.621
26.583	0.000	0.00	0.00	6.21	13.4	43.529
26.667	0.000	0.00	0.00	6.20	12.9	43.440
26.750	0.000	0.00	0.00	6.20	12.4	43.354
26.833	0.000	0.00	0.00	6.19	12.0	43.272
26.917	0.000	0.00	0.00	6.18	11.6	43.192
27.000	0.000	0.00	0.00	6.18	11.2	43.115
27.083	0.000	0.00	0.00	6.17	10.8	43.041
27.167	0.000	0.00	0.00	6.16	10.4	42.969
27.250	0.000	0.00	0.00	6.16	10.0	42.900
27.333	0.000	0.00	0.00	6.15	9.7	42.833
27.417	0.000	0.00	0.00	6.15	9.4	42.769
27.500	0.000	0.00	0.00	6.14	9.0	42.706
27.583	0.000	0.00	0.00	6.14	8.7	42.646
27.667	0.000	0.00	0.00	6.13	8.4	42.588
27.750	0.000	0.00	0.00	6.13	8.1	42.532
27.833	0.000	0.00	0.00	6.12	7.8	42.478
27.917	0.000	0.00	0.00	6.12	7.6	42.426

28.000	0.000	0.00	0.00	6.11	7.3	42.376
28.083	0.000	0.00	0.00	6.11	7.0	42.328
28.167	0.000	0.00	0.00	6.11	6.8	42.281
28.250	0.000	0.00	0.00	6.10	6.6	42.236
28.333	0.000	0.00	0.00	6.10	6.3	42.192
28.417	0.000	0.00	0.00	6.10	6.1	42.150
28.500	0.000	0.00	0.00	6.09	5.9	42.109
28.583	0.000	0.00	0.00	6.09	5.7	42.070
28.667	0.000	0.00	0.00	6.09	5.5	42.032
28.750	0.000	0.00	0.00	6.08	5.3	41.996
28.833	0.000	0.00	0.00	6.08	5.1	41.961
28.917	0.000	0.00	0.00	6.08	4.9	41.927
29.000	0.000	0.00	0.00	6.07	4.8	41.894
29.083	0.000	0.00	0.00	6.07	4.6	41.862
29.167	0.000	0.00	0.00	6.07	4.4	41.832
29.250	0.000	0.00	0.00	6.07	4.3	41.802
29.333	0.000	0.00	0.00	6.06	4.1	41.774
29.417	0.000	0.00	0.00	6.06	4.0	41.746
29.500	0.000	0.00	0.00	6.06	3.8	41.720
29.583	0.000	0.00	0.00	6.06	3.7	41.694
29.667	0.000	0.00	0.00	6.06	3.6	41.669
29.750	0.000	0.00	0.00	6.05	3.5	41.646
29.833	0.000	0.00	0.00	6.05	3.3	41.623
29.917	0.000	0.00	0.00	6.05	3.2	41.600

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 140.288 AF
BASIN STORAGE = 36.762 AF (WITH 0.000 AF INITIALLY FILLED)
OUTFLOW VOLUME = 103.514 AF
LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 1 HYDROGRAPH<<<<<
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STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	125.0	250.0	375.0	500.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0000	0.00	Q	.	.	.	.
0.417	0.0000	0.00	Q	.	.	.	.
0.500	0.0000	0.00	Q	.	.	.	.
0.583	0.0000	0.00	Q	.	.	.	.
0.667	0.0001	0.00	Q	.	.	.	.
0.750	0.0001	0.00	Q	.	.	.	.
0.833	0.0001	0.01	Q	.	.	.	.
0.917	0.0002	0.01	Q	.	.	.	.
1.000	0.0002	0.01	Q	.	.	.	.
1.083	0.0003	0.01	Q	.	.	.	.
1.167	0.0003	0.01	Q	.	.	.	.
1.250	0.0004	0.01	Q	.	.	.	.

1.333	0.0005	0.01	Q	.	.	.	.
1.417	0.0006	0.01	Q	.	.	.	.
1.500	0.0006	0.01	Q	.	.	.	.
1.583	0.0007	0.01	Q	.	.	.	.
1.667	0.0008	0.01	Q	.	.	.	.
1.750	0.0009	0.01	Q	.	.	.	.
1.833	0.0010	0.01	Q	.	.	.	.
1.917	0.0011	0.01	Q	.	.	.	.
2.000	0.0012	0.01	Q	.	.	.	.
2.083	0.0013	0.02	Q	.	.	.	.
2.167	0.0014	0.02	Q	.	.	.	.
2.250	0.0015	0.02	Q	.	.	.	.
2.333	0.0016	0.02	Q	.	.	.	.
2.417	0.0018	0.02	Q	.	.	.	.
2.500	0.0019	0.02	Q	.	.	.	.
2.583	0.0020	0.02	Q	.	.	.	.
2.667	0.0021	0.02	Q	.	.	.	.
2.750	0.0023	0.02	Q	.	.	.	.
2.833	0.0024	0.02	Q	.	.	.	.
2.917	0.0026	0.02	Q	.	.	.	.
3.000	0.0027	0.02	Q	.	.	.	.
3.083	0.0029	0.02	Q	.	.	.	.
3.167	0.0030	0.02	Q	.	.	.	.
3.250	0.0032	0.02	Q	.	.	.	.
3.333	0.0033	0.02	Q	.	.	.	.
3.417	0.0035	0.02	Q	.	.	.	.
3.500	0.0036	0.02	Q	.	.	.	.
3.583	0.0038	0.02	Q	.	.	.	.
3.667	0.0040	0.02	Q	.	.	.	.
3.750	0.0041	0.02	Q	.	.	.	.
3.833	0.0043	0.02	Q	.	.	.	.
3.917	0.0045	0.02	Q	.	.	.	.
4.000	0.0046	0.03	Q	.	.	.	.
4.083	0.0048	0.03	Q	.	.	.	.
4.167	0.0050	0.03	Q	.	.	.	.
4.250	0.0052	0.03	Q	.	.	.	.
4.333	0.0054	0.03	Q	.	.	.	.
4.417	0.0055	0.03	Q	.	.	.	.
4.500	0.0057	0.03	Q	.	.	.	.
4.583	0.0059	0.03	Q	.	.	.	.
4.667	0.0061	0.03	Q	.	.	.	.
4.750	0.0063	0.03	Q	.	.	.	.
4.833	0.0065	0.03	Q	.	.	.	.
4.917	0.0067	0.03	Q	.	.	.	.
5.000	0.0069	0.03	Q	.	.	.	.
5.083	0.0071	0.03	Q	.	.	.	.
5.167	0.0073	0.03	Q	.	.	.	.
5.250	0.0075	0.03	Q	.	.	.	.
5.333	0.0077	0.03	Q	.	.	.	.
5.417	0.0079	0.03	Q	.	.	.	.
5.500	0.0082	0.03	Q	.	.	.	.
5.583	0.0084	0.03	Q	.	.	.	.
5.667	0.0086	0.03	Q	.	.	.	.
5.750	0.0088	0.03	Q	.	.	.	.
5.833	0.0090	0.03	Q	.	.	.	.
5.917	0.0093	0.03	Q	.	.	.	.
6.000	0.0095	0.03	Q	.	.	.	.
6.083	0.0097	0.03	Q	.	.	.	.

6.167	0.0100	0.03	Q	.	.	.	.
6.250	0.0102	0.03	Q	.	.	.	.
6.333	0.0104	0.03	Q	.	.	.	.
6.417	0.0107	0.03	Q	.	.	.	.
6.500	0.0109	0.04	Q	.	.	.	.
6.583	0.0112	0.04	Q	.	.	.	.
6.667	0.0114	0.04	Q	.	.	.	.
6.750	0.0116	0.04	Q	.	.	.	.
6.833	0.0119	0.04	Q	.	.	.	.
6.917	0.0121	0.04	Q	.	.	.	.
7.000	0.0124	0.04	Q	.	.	.	.
7.083	0.0127	0.04	Q	.	.	.	.
7.167	0.0129	0.04	Q	.	.	.	.
7.250	0.0132	0.04	Q	.	.	.	.
7.333	0.0134	0.04	Q	.	.	.	.
7.417	0.0137	0.04	Q	.	.	.	.
7.500	0.0140	0.04	Q	.	.	.	.
7.583	0.0143	0.04	Q	.	.	.	.
7.667	0.0145	0.04	Q	.	.	.	.
7.750	0.0148	0.04	Q	.	.	.	.
7.833	0.0151	0.04	Q	.	.	.	.
7.917	0.0154	0.04	Q	.	.	.	.
8.000	0.0156	0.04	Q	.	.	.	.
8.083	0.0159	0.04	Q	.	.	.	.
8.167	0.0162	0.04	Q	.	.	.	.
8.250	0.0165	0.04	Q	.	.	.	.
8.333	0.0168	0.04	Q	.	.	.	.
8.417	0.0171	0.04	Q	.	.	.	.
8.500	0.0174	0.04	Q	.	.	.	.
8.583	0.0177	0.04	Q	.	.	.	.
8.667	0.0180	0.04	Q	.	.	.	.
8.750	0.0183	0.04	Q	.	.	.	.
8.833	0.0186	0.04	Q	.	.	.	.
8.917	0.0189	0.05	Q	.	.	.	.
9.000	0.0192	0.05	Q	.	.	.	.
9.083	0.0195	0.05	Q	.	.	.	.
9.167	0.0199	0.05	Q	.	.	.	.
9.250	0.0202	0.05	Q	.	.	.	.
9.333	0.0205	0.05	Q	.	.	.	.
9.417	0.0208	0.05	Q	.	.	.	.
9.500	0.0212	0.05	Q	.	.	.	.
9.583	0.0215	0.05	Q	.	.	.	.
9.667	0.0218	0.05	Q	.	.	.	.
9.750	0.0222	0.05	Q	.	.	.	.
9.833	0.0225	0.05	Q	.	.	.	.
9.917	0.0228	0.05	Q	.	.	.	.
10.000	0.0232	0.05	Q	.	.	.	.
10.083	0.0235	0.05	Q	.	.	.	.
10.167	0.0239	0.05	Q	.	.	.	.
10.250	0.0242	0.05	Q	.	.	.	.
10.333	0.0246	0.05	Q	.	.	.	.
10.417	0.0249	0.05	Q	.	.	.	.
10.500	0.0253	0.05	Q	.	.	.	.
10.583	0.0256	0.05	Q	.	.	.	.
10.667	0.0260	0.05	Q	.	.	.	.
10.750	0.0264	0.05	Q	.	.	.	.
10.833	0.0267	0.05	Q	.	.	.	.
10.917	0.0271	0.05	Q	.	.	.	.

11.000	0.0275	0.05	Q	.	.	.	.
11.083	0.0279	0.05	Q	.	.	.	.
11.167	0.0282	0.06	Q	.	.	.	.
11.250	0.0286	0.06	Q	.	.	.	.
11.333	0.0290	0.06	Q	.	.	.	.
11.417	0.0294	0.06	Q	.	.	.	.
11.500	0.0298	0.06	Q	.	.	.	.
11.583	0.0302	0.06	Q	.	.	.	.
11.667	0.0306	0.06	Q	.	.	.	.
11.750	0.0310	0.06	Q	.	.	.	.
11.833	0.0314	0.06	Q	.	.	.	.
11.917	0.0318	0.06	Q	.	.	.	.
12.000	0.0322	0.06	Q	.	.	.	.
12.083	0.0326	0.06	Q	.	.	.	.
12.167	0.0330	0.06	Q	.	.	.	.
12.250	0.0334	0.06	Q	.	.	.	.
12.333	0.0338	0.06	Q	.	.	.	.
12.417	0.0342	0.06	Q	.	.	.	.
12.500	0.0347	0.06	Q	.	.	.	.
12.583	0.0351	0.06	Q	.	.	.	.
12.667	0.0355	0.06	Q	.	.	.	.
12.750	0.0360	0.06	Q	.	.	.	.
12.833	0.0364	0.06	Q	.	.	.	.
12.917	0.0368	0.06	Q	.	.	.	.
13.000	0.0373	0.06	Q	.	.	.	.
13.083	0.0377	0.07	Q	.	.	.	.
13.167	0.0397	0.28	Q	.	.	.	.
13.250	0.0534	1.99	Q	.	.	.	.
13.333	0.0874	4.94	Q	.	.	.	.
13.417	0.1413	7.83	Q	.	.	.	.
13.500	0.2148	10.67	Q	.	.	.	.
13.583	0.3075	13.46	VQ	.	.	.	.
13.667	0.4191	16.20	VQ	.	.	.	.
13.750	0.5492	18.89	VQ	.	.	.	.
13.833	0.6977	21.55	VQ	.	.	.	.
13.917	0.8641	24.17	VQ	.	.	.	.
14.000	1.0484	26.76	V Q	.	.	.	.
14.083	1.2504	29.33	V Q	.	.	.	.
14.167	1.4700	31.88	V Q	.	.	.	.
14.250	1.7073	34.46	V Q	.	.	.	.
14.333	1.9627	37.08	V Q	.	.	.	.
14.417	2.2364	39.75	V Q	.	.	.	.
14.500	2.5290	42.48	V Q	.	.	.	.
14.583	2.8406	45.25	.V Q	.	.	.	.
14.667	3.1715	48.05	.V Q	.	.	.	.
14.750	3.5219	50.87	.V Q	.	.	.	.
14.833	3.8918	53.72	.V Q	.	.	.	.
14.917	4.2816	56.59	.V Q	.	.	.	.
15.000	4.6913	59.49	.V Q	.	.	.	.
15.083	5.1354	64.49	.V Q	.	.	.	.
15.167	5.6349	72.53	. V Q	.	.	.	.
15.250	6.1952	81.35	. V Q	.	.	.	.
15.333	6.8138	89.82	. V Q	.	.	.	.
15.417	7.4890	98.03	. V Q	.	.	.	.
15.500	8.2188	105.97	. V Q	.	.	.	.
15.583	9.0009	113.56	. V Q	.	.	.	.
15.667	9.8324	120.73	. V Q	.	.	.	.
15.750	10.7114	127.63	. V Q	.	.	.	.

15.833	11.6391	134.71	.	V	Q	.	.	.
15.917	12.6227	142.82	.	V	.Q	.	.	.
16.000	13.6783	153.26	.	V	. Q	.	.	.
16.083	14.8445	169.34	.	V	. Q	.	.	.
16.167	16.2003	196.86	.	V	. Q	.	.	.
16.250	17.8547	240.21	.	V	.	Q.	.	.
16.333	19.9665	306.63	.	V	.	.	Q	.
16.417	22.6190	385.14	.	V	.	.	.	Q
16.500	25.6663	442.48	.	V.	.	.	.	Q
16.583	28.8613	463.91	.	.V	.	.	.	Q
16.667	32.0124	457.54	.	. V	.	.	.	Q
16.750	35.0109	435.39	.	.	V	.	.	Q
16.833	37.8047	405.66	.	.	V	.	.	Q
16.917	40.3764	373.40	.	.	V	.	.	Q.
17.000	42.7326	342.12	.	.	V	.	.	Q
17.083	44.8903	313.30	.	.	V	.	.	Q
17.167	46.8718	287.72	.	.	V	.	.	Q
17.250	48.7194	268.27	.	.	V	.Q	.	.
17.333	50.4634	253.23	.	.	VQ	.	.	.
17.417	52.1081	238.81	.	.	QV	.	.	.
17.500	53.6586	225.13	.	.	Q V	.	.	.
17.583	55.1206	212.29	.	.	Q .V	.	.	.
17.667	56.5001	200.31	.	.	Q .V	.	.	.
17.750	57.8028	189.14	.	.	Q .V	.	.	.
17.833	59.0341	178.78	.	.	Q .V	.	.	.
17.917	60.1994	169.21	.	.	Q .V	.	.	.
18.000	61.3040	160.38	.	.	Q .V	.	.	.
18.083	62.3524	152.22	.	.	Q .V	.	.	.
18.167	63.3484	144.63	.	.	.Q .V	.	.	.
18.250	64.2950	137.45	.	.	Q .V	.	.	.
18.333	65.1941	130.55	.	.	Q .V	.	.	.
18.417	66.0472	123.86	.	.	Q .V	.	.	.
18.500	66.8557	117.39	.	.	Q .V	.	.	.
18.583	67.6217	111.24	.	Q	.	.	V	.
18.667	68.3480	105.46	.	Q	.	.	V	.
18.750	69.0373	100.08	.	Q	.	.	V	.
18.833	69.6924	95.11	.	Q	.	.	V	.
18.917	70.3159	90.53	.	Q	.	.	V	.
19.000	70.9104	86.32	.	Q	.	.	V	.
19.083	71.4782	82.44	.	Q	.	.	V	.
19.167	72.0214	78.87	.	Q	.	.	V	.
19.250	72.5419	75.58	.	Q	.	.	V	.
19.333	73.0415	72.55	.	Q	.	.	V	.
19.417	73.5219	69.75	.	Q	.	.	V	.
19.500	73.9846	67.17	.	Q	.	.	V	.
19.583	74.4307	64.79	.	Q	.	.	V	.
19.667	74.8628	62.74	.	Q	.	.	V	.
19.750	75.2865	61.52	.	Q	.	.	V.	.
19.833	75.7058	60.88	.	Q	.	.	V.	.
19.917	76.1206	60.23	.	Q	.	.	V.	.
20.000	76.5310	59.59	.	Q	.	.	V.	.
20.083	76.9370	58.94	.	Q	.	.	V.	.
20.167	77.3385	58.30	.	Q	.	.	V.	.
20.250	77.7356	57.66	.	Q	.	.	V	.
20.333	78.1284	57.03	.	Q	.	.	V	.
20.417	78.5168	56.40	.	Q	.	.	V	.
20.500	78.9009	55.77	.	Q	.	.	V	.
20.583	79.2807	55.15	.	Q	.	.	V	.

20.667	79.6562	54.53	. Q	.	.	V	.
20.750	80.0275	53.92	. Q	.	.	V	.
20.833	80.3947	53.31	. Q	.	.	.V	.
20.917	80.7577	52.71	. Q	.	.	.V	.
21.000	81.1166	52.11	. Q	.	.	.V	.
21.083	81.4715	51.53	. Q	.	.	.V	.
21.167	81.8223	50.95	. Q	.	.	.V	.
21.250	82.1693	50.37	. Q	.	.	.V	.
21.333	82.5123	49.80	. Q	.	.	.V	.
21.417	82.8514	49.24	. Q	.	.	. V	.
21.500	83.1868	48.69	. Q	.	.	. V	.
21.583	83.5183	48.15	. Q	.	.	. V	.
21.667	83.8462	47.61	. Q	.	.	. V	.
21.750	84.1704	47.08	. Q	.	.	. V	.
21.833	84.4911	46.55	. Q	.	.	. V	.
21.917	84.8081	46.04	. Q	.	.	. V	.
22.000	85.1217	45.53	. Q	.	.	. V	.
22.083	85.4318	45.03	. Q	.	.	. V	.
22.167	85.7385	44.54	. Q	.	.	. V	.
22.250	86.0419	44.05	. Q	.	.	. V	.
22.333	86.3420	43.57	. Q	.	.	. V	.
22.417	86.6388	43.10	. Q	.	.	. V	.
22.500	86.9324	42.64	. Q	.	.	. V	.
22.583	87.2229	42.18	. Q	.	.	. V	.
22.667	87.5103	41.73	. Q	.	.	. V	.
22.750	87.7947	41.29	. Q	.	.	. V	.
22.833	88.0760	40.85	. Q	.	.	. V	.
22.917	88.3544	40.42	. Q	.	.	. V	.
23.000	88.6299	40.00	. Q	.	.	. V	.
23.083	88.9025	39.59	. Q	.	.	. V	.
23.167	89.1724	39.18	. Q	.	.	. V	.
23.250	89.4394	38.78	. Q	.	.	. V	.
23.333	89.7038	38.38	. Q	.	.	. V	.
23.417	89.9654	37.99	. Q	.	.	. V	.
23.500	90.2245	37.61	. Q	.	.	. V	.
23.583	90.4809	37.24	. Q	.	.	. V	.
23.667	90.7349	36.87	. Q	.	.	. V	.
23.750	90.9863	36.51	. Q	.	.	. V	.
23.833	91.2352	36.15	. Q	.	.	. V	.
23.917	91.4818	35.80	. Q	.	.	. V	.
24.000	91.7260	35.45	. Q	.	.	. V	.
24.083	91.9678	35.11	. Q	.	.	. V	.
24.167	92.2070	34.73	. Q	.	.	. V	.
24.250	92.4430	34.28	. Q	.	.	. V	.
24.333	92.6751	33.69	. Q	.	.	. V	.
24.417	92.9021	32.95	. Q	.	.	. V	.
24.500	93.1230	32.08	. Q	.	.	. V	.
24.583	93.3373	31.12	. Q	.	.	. V	.
24.667	93.5447	30.12	. Q	.	.	. V	.
24.750	93.7452	29.12	. Q	.	.	. V	.
24.833	93.9389	28.13	. Q	.	.	. V	.
24.917	94.1260	27.16	. Q	.	.	. V	.
25.000	94.3067	26.23	. Q	.	.	. V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1505.0
10%	435.0
20%	210.0
30%	140.0
40%	100.0
50%	75.0
60%	55.0
70%	40.0
80%	35.0
90%	20.0
=====	=====

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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED C *
* UNIT HYDROGRAPH - COMPLEX MODEL - SINGLE BASIN *
* 10-YR EV APRIL 2023 ROKAMOTO *

FILE NAME: 3C10EVC.DAT
TIME/DATE OF STUDY: 12:28 04/29/2023

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

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(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 712.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.313 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.100
LOW LOSS FRACTION = 0.297
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.26
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.59
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.78
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.31
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.81
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.03

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 26.624

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.615	139.146
2	8.456	589.597
3	23.383	1286.391
4	43.396	1724.746
5	65.168	1876.306
6	80.812	1348.161
7	89.718	767.544
8	94.677	427.376
9	97.294	225.545
10	98.336	89.806
11	98.835	43.016
12	99.328	42.459
13	99.731	34.748
14	99.933	17.374
15	100.000	5.791

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 46.1002
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 133.2953

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

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HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q(CFS)	0.	200.0	400.0	600.0	800.0
0.083	0.0026	0.38	Q	.	.	.	.
0.167	0.0165	2.01	Q	.	.	.	.
0.250	0.0547	5.56	Q	.	.	.	.
0.333	0.1258	10.32	Q	.	.	.	.
0.417	0.2327	15.52	Q	.	.	.	.
0.500	0.3655	19.28	Q	.	.	.	.
0.583	0.5133	21.46	VQ	.	.	.	.
0.667	0.6696	22.71	VQ	.	.	.	.
0.750	0.8308	23.40	VQ	.	.	.	.
0.833	0.9942	23.73	VQ	.	.	.	.
0.917	1.1590	23.93	VQ	.	.	.	.
1.000	1.3252	24.12	VQ	.	.	.	.
1.083	1.4925	24.30	VQ	.	.	.	.
1.167	1.6608	24.43	VQ	.	.	.	.
1.250	1.8297	24.53	VQ	.	.	.	.
1.333	1.9993	24.62	VQ	.	.	.	.
1.417	2.1694	24.70	VQ	.	.	.	.
1.500	2.3401	24.79	VQ	.	.	.	.
1.583	2.5115	24.88	VQ	.	.	.	.
1.667	2.6834	24.97	VQ	.	.	.	.
1.750	2.8560	25.06	VQ	.	.	.	.
1.833	3.0291	25.14	VQ	.	.	.	.
1.917	3.2029	25.24	VQ	.	.	.	.
2.000	3.3774	25.33	.Q	.	.	.	.
2.083	3.5524	25.42	.Q	.	.	.	.
2.167	3.7281	25.51	.Q	.	.	.	.
2.250	3.9045	25.61	.Q	.	.	.	.
2.333	4.0815	25.70	.Q	.	.	.	.
2.417	4.2592	25.80	.Q	.	.	.	.
2.500	4.4375	25.89	.Q	.	.	.	.
2.583	4.6165	25.99	.Q	.	.	.	.
2.667	4.7962	26.09	.Q	.	.	.	.
2.750	4.9766	26.19	.Q	.	.	.	.
2.833	5.1577	26.29	.Q	.	.	.	.
2.917	5.3394	26.39	.Q	.	.	.	.
3.000	5.5219	26.50	.Q	.	.	.	.
3.083	5.7051	26.60	.Q	.	.	.	.
3.167	5.8890	26.71	.Q	.	.	.	.
3.250	6.0737	26.81	.Q	.	.	.	.
3.333	6.2591	26.92	.Q	.	.	.	.
3.417	6.4452	27.03	.Q	.	.	.	.
3.500	6.6321	27.14	.Q	.	.	.	.
3.583	6.8197	27.25	.QV	.	.	.	.
3.667	7.0082	27.36	.QV	.	.	.	.
3.750	7.1974	27.47	.QV	.	.	.	.
3.833	7.3873	27.58	.QV	.	.	.	.
3.917	7.5781	27.70	.QV	.	.	.	.

4.000	7.7697	27.82	.QV	.	.	.	.
4.083	7.9621	27.94	.QV	.	.	.	.
4.167	8.1553	28.05	.QV	.	.	.	.
4.250	8.3493	28.17	.QV	.	.	.	.
4.333	8.5442	28.30	.QV	.	.	.	.
4.417	8.7399	28.42	.QV	.	.	.	.
4.500	8.9365	28.54	.QV	.	.	.	.
4.583	9.1340	28.67	.QV	.	.	.	.
4.667	9.3323	28.80	.QV	.	.	.	.
4.750	9.5315	28.93	.QV	.	.	.	.
4.833	9.7317	29.06	.QV	.	.	.	.
4.917	9.9327	29.19	.QV	.	.	.	.
5.000	10.1346	29.32	.Q V	.	.	.	.
5.083	10.3375	29.46	.Q V	.	.	.	.
5.167	10.5413	29.59	.Q V	.	.	.	.
5.250	10.7461	29.73	.Q V	.	.	.	.
5.333	10.9519	29.87	.Q V	.	.	.	.
5.417	11.1586	30.02	.Q V	.	.	.	.
5.500	11.3663	30.16	.Q V	.	.	.	.
5.583	11.5750	30.31	.Q V	.	.	.	.
5.667	11.7847	30.45	.Q V	.	.	.	.
5.750	11.9955	30.60	.Q V	.	.	.	.
5.833	12.2073	30.75	.Q V	.	.	.	.
5.917	12.4202	30.91	.Q V	.	.	.	.
6.000	12.6341	31.06	.Q V	.	.	.	.
6.083	12.8491	31.22	.Q V	.	.	.	.
6.167	13.0652	31.38	.Q V	.	.	.	.
6.250	13.2824	31.54	.Q V	.	.	.	.
6.333	13.5007	31.70	.Q V	.	.	.	.
6.417	13.7202	31.87	.Q V	.	.	.	.
6.500	13.9408	32.04	.Q V	.	.	.	.
6.583	14.1626	32.21	.Q V	.	.	.	.
6.667	14.3856	32.38	.Q V	.	.	.	.
6.750	14.6098	32.55	.Q V	.	.	.	.
6.833	14.8353	32.73	.Q V	.	.	.	.
6.917	15.0619	32.91	.Q V	.	.	.	.
7.000	15.2899	33.09	.Q V	.	.	.	.
7.083	15.5191	33.28	.Q V	.	.	.	.
7.167	15.7496	33.47	.Q V	.	.	.	.
7.250	15.9814	33.66	.Q V	.	.	.	.
7.333	16.2145	33.85	.Q V	.	.	.	.
7.417	16.4490	34.05	.Q V	.	.	.	.
7.500	16.6849	34.25	.Q V	.	.	.	.
7.583	16.9222	34.45	.Q V	.	.	.	.
7.667	17.1608	34.66	.Q V	.	.	.	.
7.750	17.4010	34.87	.Q V	.	.	.	.
7.833	17.6425	35.08	.Q V	.	.	.	.
7.917	17.8856	35.29	.Q V	.	.	.	.
8.000	18.1302	35.51	.Q V	.	.	.	.
8.083	18.3763	35.74	.Q V	.	.	.	.
8.167	18.6240	35.96	.Q V	.	.	.	.
8.250	18.8733	36.19	.Q V	.	.	.	.
8.333	19.1241	36.43	.Q V	.	.	.	.
8.417	19.3767	36.67	.Q V	.	.	.	.
8.500	19.6309	36.91	.Q V	.	.	.	.
8.583	19.8867	37.16	.Q V	.	.	.	.
8.667	20.1444	37.40	.Q V	.	.	.	.
8.750	20.4037	37.66	.Q V	.	.	.	.

8.833	20.6649	37.92	.Q	V	.	.	.	.
8.917	20.9279	38.18	.Q	V	.	.	.	.
9.000	21.1927	38.45	.Q	V	.	.	.	.
9.083	21.4594	38.73	.Q	V	.	.	.	.
9.167	21.7280	39.01	.Q	V	.	.	.	.
9.250	21.9987	39.29	.Q	V	.	.	.	.
9.333	22.2712	39.58	.Q	V	.	.	.	.
9.417	22.5459	39.88	.Q	V	.	.	.	.
9.500	22.8226	40.18	.Q	V	.	.	.	.
9.583	23.1014	40.49	.Q	V	.	.	.	.
9.667	23.3824	40.80	.Q	V	.	.	.	.
9.750	23.6656	41.12	.Q	V	.	.	.	.
9.833	23.9511	41.45	.Q	V	.	.	.	.
9.917	24.2388	41.78	.Q	V	.	.	.	.
10.000	24.5289	42.12	.Q	V	.	.	.	.
10.083	24.8214	42.47	.Q	V	.	.	.	.
10.167	25.1163	42.82	.Q	V	.	.	.	.
10.250	25.4138	43.19	.Q	V	.	.	.	.
10.333	25.7138	43.56	.Q	V	.	.	.	.
10.417	26.0164	43.94	.Q	V	.	.	.	.
10.500	26.3217	44.33	.Q	V	.	.	.	.
10.583	26.6297	44.73	.Q	V	.	.	.	.
10.667	26.9405	45.13	.Q	V	.	.	.	.
10.750	27.2542	45.55	.Q	V	.	.	.	.
10.833	27.5709	45.97	.Q	V	.	.	.	.
10.917	27.8905	46.41	.Q	V	.	.	.	.
11.000	28.2132	46.86	.Q	V	.	.	.	.
11.083	28.5392	47.32	.Q	V	.	.	.	.
11.167	28.8683	47.79	.Q	V	.	.	.	.
11.250	29.2008	48.28	.Q	V	.	.	.	.
11.333	29.5367	48.77	.Q	V	.	.	.	.
11.417	29.8761	49.29	.Q	V	.	.	.	.
11.500	30.2192	49.81	.Q	V	.	.	.	.
11.583	30.5659	50.35	.Q	V	.	.	.	.
11.667	30.9165	50.90	.Q	V	.	.	.	.
11.750	31.2710	51.48	.Q	V	.	.	.	.
11.833	31.6296	52.06	.Q	V	.	.	.	.
11.917	31.9923	52.67	.Q	V	.	.	.	.
12.000	32.3593	53.29	.Q	V	.	.	.	.
12.083	32.7325	54.18	.Q	V	.	.	.	.
12.167	33.1174	55.88	.Q	V	.	.	.	.
12.250	33.5226	58.84	.Q	V	.	.	.	.
12.333	33.9536	62.58	.Q	V	.	.	.	.
12.417	34.4126	66.64	.Q	V	.	.	.	.
12.500	34.8932	69.79	.Q	V	.	.	.	.
12.583	35.3889	71.97	.Q	V	.	.	.	.
12.667	35.8956	73.58	.Q	V	.	.	.	.
12.750	36.4112	74.87	.Q	V	.	.	.	.
12.833	36.9342	75.94	.Q	.V	.	.	.	.
12.917	37.4644	76.98	.Q	.V	.	.	.	.
13.000	38.0019	78.04	.Q	.V	.	.	.	.
13.083	38.5470	79.14	.Q	.V	.	.	.	.
13.167	39.0996	80.24	.Q	.V	.	.	.	.
13.250	39.6600	81.37	.Q	.V	.	.	.	.
13.333	40.2284	82.53	.Q	.V	.	.	.	.
13.417	40.8052	83.75	.Q	.V	.	.	.	.
13.500	41.3907	85.01	.Q	.V	.	.	.	.
13.583	41.9853	86.34	.Q	.V	.	.	.	.

13.667	42.5894	87.72	.Q	.V	.	.	.	.
13.750	43.2036	89.18	.Q	.V	.	.	.	.
13.833	43.8282	90.69	.Q	.V	.	.	.	.
13.917	44.4638	92.30	.Q	.V	.	.	.	.
14.000	45.1111	93.98	.Q	.V	.	.	.	.
14.083	45.7717	95.93	.Q	.V	.	.	.	.
14.167	46.4500	98.48	.Q	.V	.	.	.	.
14.250	47.1522	101.97	.Q	.V	.	.	.	.
14.333	47.8826	106.06	.Q	.V	.	.	.	.
14.417	48.6435	110.48	.Q	.V	.	.	.	.
14.500	49.4316	114.42	.Q	.V	.	.	.	.
14.583	50.2435	117.89	.Q	.V	.	.	.	.
14.667	51.0776	121.12	.Q	.V	.	.	.	.
14.750	51.9341	124.36	.Q	.V	.	.	.	.
14.833	52.8132	127.64	.Q	.V	.	.	.	.
14.917	53.7166	131.18	.Q	.V	.	.	.	.
15.000	54.6462	134.98	.Q	.V	.	.	.	.
15.083	55.6048	139.19	.Q	.V	.	.	.	.
15.167	56.5948	143.74	.Q	.V	.	.	.	.
15.250	57.6201	148.88	.Q	.V	.	.	.	.
15.333	58.6857	154.72	.Q	.V	.	.	.	.
15.417	59.7940	160.92	.Q	.V	.	.	.	.
15.500	60.9358	165.79	.Q	.V	.	.	.	.
15.583	62.0950	168.32	.Q	.V	.	.	.	.
15.667	63.2667	170.13	.Q	.V	.	.	.	.
15.750	64.4709	174.84	.Q	.V	.	.	.	.
15.833	65.7757	189.45	.Q	.V	.	.	.	.
15.917	67.2884	219.66	.Q	.V	.	.	.	.
16.000	69.1429	269.26	.Q	.V	.	.	.	.
16.083	71.6556	364.85	.Q	.V	.	.	.	.
16.167	75.2372	520.04	.Q	.V	.Q	.	.	.
16.250	80.0337	696.45	.Q	.V	.Q	.	.	.
16.333	85.4332	784.01	.Q	.V	.Q	.	.	.
16.417	90.7154	766.98	.Q	.V	.Q	.	.	.
16.500	94.8774	604.32	.Q	.V	.Q	.	.	.
16.583	97.8588	432.89	.Q	.V	.Q	.	.	.
16.667	100.0576	319.27	.Q	.V	.Q	.	.	.
16.750	101.7649	247.89	.Q	.V	.Q	.	.	.
16.833	103.1396	199.62	.Q	.V	.Q	.	.	.
16.917	104.3385	174.07	.Q	.V	.Q	.	.	.
17.000	105.4472	160.99	.Q	.V	.Q	.	.	.
17.083	106.4713	148.70	.Q	.V	.Q	.	.	.
17.167	107.4046	135.52	.Q	.V	.Q	.	.	.
17.250	108.2593	124.10	.Q	.V	.Q	.	.	.
17.333	109.0500	114.81	.Q	.V	.Q	.	.	.
17.417	109.7902	107.47	.Q	.V	.Q	.	.	.
17.500	110.4890	101.47	.Q	.V	.Q	.	.	.
17.583	111.1546	96.65	.Q	.V	.Q	.	.	.
17.667	111.7926	92.63	.Q	.V	.Q	.	.	.
17.750	112.4070	89.22	.Q	.V	.Q	.	.	.
17.833	113.0011	86.26	.Q	.V	.Q	.	.	.
17.917	113.5770	83.61	.Q	.V	.Q	.	.	.
18.000	114.1361	81.19	.Q	.V	.Q	.	.	.
18.083	114.6782	78.71	.Q	.V	.Q	.	.	.
18.167	115.1991	75.64	.Q	.V	.Q	.	.	.
18.250	115.6915	71.50	.Q	.V	.Q	.	.	.
18.333	116.1512	66.75	.Q	.V	.Q	.	.	.
18.417	116.5773	61.86	.Q	.V	.Q	.	.	.

18.500	116.9769	58.03	.Q	.	.	.	V	.
18.583	117.3579	55.32	.Q	.	.	.	V	.
18.667	117.7250	53.30	.Q	.	.	.	V	.
18.750	118.0811	51.71	.Q	.	.	.	V	.
18.833	118.4284	50.43	.Q	.	.	.	V	.
18.917	118.7678	49.29	.Q	.	.	.	V	.
19.000	119.0999	48.21	.Q	.	.	.	V	.
19.083	119.4250	47.20	.Q	.	.	.	V	.
19.167	119.7436	46.27	.Q	.	.	.	V	.
19.250	120.0563	45.40	.Q	.	.	.	V	.
19.333	120.3633	44.58	.Q	.	.	.	V	.
19.417	120.6650	43.80	.Q	.	.	.	V	.
19.500	120.9615	43.05	.Q	.	.	.	V	.
19.583	121.2530	42.34	.Q	.	.	.	V	.
19.667	121.5399	41.65	.Q	.	.	.	V	.
19.750	121.8223	41.00	.Q	.	.	.	V	.
19.833	122.1003	40.37	.Q	.	.	.	V	.
19.917	122.3741	39.76	.Q	.	.	.	V	.
20.000	122.6439	39.18	.Q	.	.	.	V	.
20.083	122.9099	38.62	.Q	.	.	.	V	.
20.167	123.1721	38.08	.Q	.	.	.	V	.
20.250	123.4308	37.56	.Q	.	.	.	V	.
20.333	123.6860	37.05	.Q	.	.	.	V	.
20.417	123.9379	36.57	.Q	.	.	.	V	.
20.500	124.1865	36.10	.Q	.	.	.	V	.
20.583	124.4320	35.65	.Q	.	.	.	V	.
20.667	124.6744	35.21	.Q	.	.	.	V	.
20.750	124.9140	34.78	.Q	.	.	.	V	.
20.833	125.1506	34.37	.Q	.	.	.	V	.
20.917	125.3846	33.97	.Q	.	.	.	V	.
21.000	125.6158	33.58	.Q	.	.	.	V	.
21.083	125.8445	33.20	.Q	.	.	.	V	.
21.167	126.0706	32.83	.Q	.	.	.	V	.
21.250	126.2943	32.48	.Q	.	.	.	V	.
21.333	126.5156	32.13	.Q	.	.	.	V	.
21.417	126.7346	31.80	.Q	.	.	.	V	.
21.500	126.9513	31.47	.Q	.	.	.	V	.
21.583	127.1658	31.15	.Q	.	.	.	V	.
21.667	127.3782	30.84	.Q	.	.	.	V	.
21.750	127.5885	30.54	.Q	.	.	.	V	.
21.833	127.7968	30.24	.Q	.	.	.	V	.
21.917	128.0031	29.95	.Q	.	.	.	V	.
22.000	128.2074	29.67	.Q	.	.	.	V	.
22.083	128.4099	29.40	.Q	.	.	.	V	.
22.167	128.6105	29.13	.Q	.	.	.	V	.
22.250	128.8093	28.87	.Q	.	.	.	V	.
22.333	129.0064	28.61	.Q	.	.	.	V	.
22.417	129.2017	28.36	.Q	.	.	.	V	.
22.500	129.3954	28.12	.Q	.	.	.	V	.
22.583	129.5874	27.88	.Q	.	.	.	V	.
22.667	129.7778	27.65	.Q	.	.	.	V	.
22.750	129.9667	27.42	.Q	.	.	.	V	.
22.833	130.1540	27.20	.Q	.	.	.	V	.
22.917	130.3398	26.98	.Q	.	.	.	V	.
23.000	130.5241	26.76	.Q	.	.	.	V	.
23.083	130.7069	26.55	.Q	.	.	.	V	.
23.167	130.8884	26.35	.Q	.	.	.	V	.
23.250	131.0684	26.14	.Q	.	.	.	V	.

23.333	131.2471	25.95	.Q	.	.	.	V	.
23.417	131.4245	25.75	.Q	.	.	.	V	.
23.500	131.6006	25.56	.Q	.	.	.	V	.
23.583	131.7753	25.38	.Q	.	.	.	V	.
23.667	131.9488	25.19	.Q	.	.	.	V	.
23.750	132.1211	25.01	.Q	.	.	.	V	.
23.833	132.2922	24.84	.Q	.	.	.	V	.
23.917	132.4620	24.66	.Q	.	.	.	V	.
24.000	132.6307	24.49	.Q	.	.	.	V	.
24.083	132.7956	23.94	.Q	.	.	.	V	.
24.167	132.9483	22.16	.Q	.	.	.	V	.
24.250	133.0755	18.48	Q	.	.	.	V	.
24.333	133.1693	13.62	Q	.	.	.	V	.
24.417	133.2270	8.37	Q	.	.	.	V	.
24.500	133.2587	4.61	Q	.	.	.	V	.
24.583	133.2757	2.47	Q	.	.	.	V	.
24.667	133.2845	1.28	Q	.	.	.	V	.
24.750	133.2890	0.65	Q	.	.	.	V	.
24.833	133.2918	0.40	Q	.	.	.	V	.
24.917	133.2937	0.28	Q	.	.	.	V	.
25.000	133.2948	0.16	Q	.	.	.	V	.
25.083	133.2953	0.06	Q	.	.	.	V	.
25.167	133.2954	0.02	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1510.0
10%	305.0
20%	100.0
30%	50.0
40%	40.0
50%	30.0
60%	25.0
70%	20.0
80%	15.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 462.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.269 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED

MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.135
 LOW LOSS FRACTION = 0.381
 HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.26
 SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.59
 SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.78
 SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.31
 SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.81
 SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.03

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
 5-MINUTE FACTOR = 0.942
 30-MINUTE FACTOR = 0.942
 1-HOUR FACTOR = 0.942
 3-HOUR FACTOR = 0.991
 6-HOUR FACTOR = 0.996
 24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
 UNIT INTERVAL PERCENTAGE OF LAG-TIME = 30.979

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.954	109.311
2	11.698	544.978
3	30.879	1072.883
4	56.241	1418.561
5	77.357	1181.114
6	89.004	651.478
7	94.861	327.582
8	97.633	155.052
9	98.531	50.236
10	99.112	32.492
11	99.645	29.803
12	99.911	14.901
13	100.000	4.967

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 38.6381
 TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 77.7998

24 - HOUR STORM
 RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	150.0	300.0	450.0	600.0
0.083	0.0018	0.27	Q	.	.	.	.
0.167	0.0128	1.59	Q	.	.	.	.
0.250	0.0416	4.19	Q	.	.	.	.
0.333	0.0943	7.64	Q	.	.	.	.
0.417	0.1668	10.53	Q	.	.	.	.
0.500	0.2505	12.15	Q	.	.	.	.
0.583	0.3399	12.98	Q	.	.	.	.
0.667	0.4321	13.40	Q	.	.	.	.
0.750	0.5256	13.57	Q	.	.	.	.
0.833	0.6198	13.69	Q	.	.	.	.
0.917	0.7149	13.81	Q	.	.	.	.
1.000	0.8106	13.89	Q	.	.	.	.
1.083	0.9067	13.95	Q	.	.	.	.
1.167	1.0031	14.00	Q	.	.	.	.
1.250	1.0998	14.05	Q	.	.	.	.
1.333	1.1969	14.10	Q	.	.	.	.
1.417	1.2943	14.14	Q	.	.	.	.
1.500	1.3921	14.19	Q	.	.	.	.
1.583	1.4902	14.24	Q	.	.	.	.
1.667	1.5887	14.30	Q	.	.	.	.
1.750	1.6875	14.35	Q	.	.	.	.
1.833	1.7866	14.40	Q	.	.	.	.
1.917	1.8861	14.45	Q	.	.	.	.
2.000	1.9860	14.50	QV	.	.	.	.
2.083	2.0863	14.56	QV	.	.	.	.
2.167	2.1869	14.61	QV	.	.	.	.
2.250	2.2879	14.66	QV	.	.	.	.
2.333	2.3893	14.72	QV	.	.	.	.
2.417	2.4910	14.77	QV	.	.	.	.
2.500	2.5931	14.83	QV	.	.	.	.
2.583	2.6957	14.89	QV	.	.	.	.
2.667	2.7986	14.94	QV	.	.	.	.
2.750	2.9019	15.00	QV	.	.	.	.
2.833	3.0056	15.06	.Q	.	.	.	.
2.917	3.1097	15.12	.Q	.	.	.	.
3.000	3.2142	15.18	.Q	.	.	.	.
3.083	3.3191	15.23	.Q	.	.	.	.
3.167	3.4244	15.30	.Q	.	.	.	.
3.250	3.5302	15.36	.Q	.	.	.	.
3.333	3.6364	15.42	.Q	.	.	.	.
3.417	3.7430	15.48	.Q	.	.	.	.
3.500	3.8500	15.54	.Q	.	.	.	.
3.583	3.9575	15.61	.QV	.	.	.	.
3.667	4.0654	15.67	.QV	.	.	.	.
3.750	4.1738	15.74	.QV	.	.	.	.
3.833	4.2826	15.80	.QV	.	.	.	.
3.917	4.3919	15.87	.QV	.	.	.	.

4.000	4.5016	15.93	.QV	.	.	.	.
4.083	4.6119	16.00	.QV	.	.	.	.
4.167	4.7225	16.07	.QV	.	.	.	.
4.250	4.8337	16.14	.QV	.	.	.	.
4.333	4.9453	16.21	.QV	.	.	.	.
4.417	5.0575	16.28	.QV	.	.	.	.
4.500	5.1701	16.35	.QV	.	.	.	.
4.583	5.2832	16.43	.QV	.	.	.	.
4.667	5.3968	16.50	.QV	.	.	.	.
4.750	5.5110	16.57	.QV	.	.	.	.
4.833	5.6256	16.65	.QV	.	.	.	.
4.917	5.7408	16.72	.QV	.	.	.	.
5.000	5.8565	16.80	.Q V	.	.	.	.
5.083	5.9727	16.88	.Q V	.	.	.	.
5.167	6.0895	16.96	.Q V	.	.	.	.
5.250	6.2068	17.04	.Q V	.	.	.	.
5.333	6.3247	17.12	.Q V	.	.	.	.
5.417	6.4432	17.20	.Q V	.	.	.	.
5.500	6.5622	17.28	.Q V	.	.	.	.
5.583	6.6818	17.37	.Q V	.	.	.	.
5.667	6.8020	17.45	.Q V	.	.	.	.
5.750	6.9228	17.54	.Q V	.	.	.	.
5.833	7.0441	17.62	.Q V	.	.	.	.
5.917	7.1661	17.71	.Q V	.	.	.	.
6.000	7.2887	17.80	.Q V	.	.	.	.
6.083	7.4119	17.89	.Q V	.	.	.	.
6.167	7.5358	17.98	.Q V	.	.	.	.
6.250	7.6603	18.08	.Q V	.	.	.	.
6.333	7.7854	18.17	.Q V	.	.	.	.
6.417	7.9112	18.26	.Q V	.	.	.	.
6.500	8.0376	18.36	.Q V	.	.	.	.
6.583	8.1648	18.46	.Q V	.	.	.	.
6.667	8.2926	18.56	.Q V	.	.	.	.
6.750	8.4211	18.66	.Q V	.	.	.	.
6.833	8.5503	18.76	.Q V	.	.	.	.
6.917	8.6803	18.87	.Q V	.	.	.	.
7.000	8.8109	18.97	.Q V	.	.	.	.
7.083	8.9423	19.08	.Q V	.	.	.	.
7.167	9.0744	19.19	.Q V	.	.	.	.
7.250	9.2073	19.30	.Q V	.	.	.	.
7.333	9.3410	19.41	.Q V	.	.	.	.
7.417	9.4755	19.52	.Q V	.	.	.	.
7.500	9.6107	19.64	.Q V	.	.	.	.
7.583	9.7467	19.75	.Q V	.	.	.	.
7.667	9.8836	19.87	.Q V	.	.	.	.
7.750	10.0213	19.99	.Q V	.	.	.	.
7.833	10.1598	20.11	.Q V	.	.	.	.
7.917	10.2992	20.24	.Q V	.	.	.	.
8.000	10.4394	20.37	.Q V	.	.	.	.
8.083	10.5806	20.49	.Q V	.	.	.	.
8.167	10.7226	20.62	.Q V	.	.	.	.
8.250	10.8656	20.76	.Q V	.	.	.	.
8.333	11.0095	20.89	.Q V	.	.	.	.
8.417	11.1543	21.03	.Q V	.	.	.	.
8.500	11.3001	21.17	.Q V	.	.	.	.
8.583	11.4469	21.31	.Q V	.	.	.	.
8.667	11.5947	21.46	.Q V	.	.	.	.
8.750	11.7434	21.60	.Q V	.	.	.	.

8.833	11.8933	21.75	.Q	V	.	.	.
8.917	12.0441	21.91	.Q	V	.	.	.
9.000	12.1961	22.06	.Q	V	.	.	.
9.083	12.3491	22.22	.Q	V	.	.	.
9.167	12.5032	22.38	.Q	V	.	.	.
9.250	12.6585	22.55	.Q	V	.	.	.
9.333	12.8149	22.71	.Q	V	.	.	.
9.417	12.9725	22.88	.Q	V	.	.	.
9.500	13.1313	23.06	.Q	V	.	.	.
9.583	13.2914	23.24	.Q	V	.	.	.
9.667	13.4526	23.42	.Q	V	.	.	.
9.750	13.6152	23.60	.Q	V	.	.	.
9.833	13.7790	23.79	.Q	V	.	.	.
9.917	13.9442	23.98	.Q	V	.	.	.
10.000	14.1107	24.18	.Q	V	.	.	.
10.083	14.2787	24.38	.Q	V	.	.	.
10.167	14.4480	24.59	.Q	V	.	.	.
10.250	14.6188	24.80	.Q	V	.	.	.
10.333	14.7910	25.01	.Q	V	.	.	.
10.417	14.9648	25.23	.Q	V	.	.	.
10.500	15.1401	25.46	.Q	V	.	.	.
10.583	15.3170	25.69	.Q	V	.	.	.
10.667	15.4956	25.92	.Q	V	.	.	.
10.750	15.6757	26.16	.Q	V	.	.	.
10.833	15.8576	26.41	.Q	V	.	.	.
10.917	16.0413	26.66	.Q	V	.	.	.
11.000	16.2267	26.92	.Q	V	.	.	.
11.083	16.4140	27.19	.Q	V	.	.	.
11.167	16.6031	27.46	.Q	V	.	.	.
11.250	16.7942	27.74	.Q	V	.	.	.
11.333	16.9872	28.03	.Q	V	.	.	.
11.417	17.1823	28.33	.Q	V	.	.	.
11.500	17.3795	28.63	.Q	V	.	.	.
11.583	17.5789	28.95	.Q	V	.	.	.
11.667	17.7805	29.27	.Q	V	.	.	.
11.750	17.9843	29.60	.Q	V	.	.	.
11.833	18.1905	29.94	.Q	V	.	.	.
11.917	18.3991	30.29	.Q	V	.	.	.
12.000	18.6103	30.66	.Q	V	.	.	.
12.083	18.8251	31.20	.Q	V	.	.	.
12.167	19.0485	32.43	.Q	V	.	.	.
12.250	19.2860	34.49	.Q	V	.	.	.
12.333	19.5416	37.11	.Q	V	.	.	.
12.417	19.8128	39.38	.Q	V	.	.	.
12.500	20.0941	40.85	.Q	V	.	.	.
12.583	20.3822	41.84	.Q	V	.	.	.
12.667	20.6755	42.58	.Q	V	.	.	.
12.750	20.9728	43.17	.Q	V	.	.	.
12.833	21.2742	43.76	.Q	V	.	.	.
12.917	21.5798	44.37	.Q	.V	.	.	.
13.000	21.8895	44.97	.Q	.V	.	.	.
13.083	22.2034	45.58	.Q	.V	.	.	.
13.167	22.5216	46.21	.Q	.V	.	.	.
13.250	22.8443	46.86	.Q	.V	.	.	.
13.333	23.1717	47.54	.Q	.V	.	.	.
13.417	23.5040	48.24	.Q	.V	.	.	.
13.500	23.8414	48.99	.Q	.V	.	.	.
13.583	24.1840	49.76	.Q	.V	.	.	.

13.667	24.5323	50.57	. Q	. V	.	.	.
13.750	24.8865	51.42	. Q	. V	.	.	.
13.833	25.2468	52.32	. Q	. V	.	.	.
13.917	25.6136	53.25	. Q	. V	.	.	.
14.000	25.9872	54.25	. Q	. V	.	.	.
14.083	26.3687	55.40	. Q	. V	.	.	.
14.167	26.7617	57.07	. Q	. V	.	.	.
14.250	27.1703	59.33	. Q	. V	.	.	.
14.333	27.5974	62.02	. Q	. V	.	.	.
14.417	28.0419	64.54	. Q	. V	.	.	.
14.500	28.5008	66.62	. Q	. V	.	.	.
14.583	28.9723	68.47	. Q	. V	.	.	.
14.667	29.4562	70.27	. Q	. V	.	.	.
14.750	29.9526	72.07	. Q	. V	.	.	.
14.833	30.4623	74.01	. Q	. V	.	.	.
14.917	30.9864	76.10	. Q	. V	.	.	.
15.000	31.5262	78.38	. Q	. V	.	.	.
15.083	32.0831	80.85	. Q	. V	.	.	.
15.167	32.6588	83.60	. Q	. V	.	.	.
15.250	33.2556	86.64	. Q	. V	.	.	.
15.333	33.8761	90.11	. Q	. V	.	.	.
15.417	34.5206	93.58	. Q	. V	.	.	.
15.500	35.1802	95.77	. Q	. V	.	.	.
15.583	35.8439	96.36	. Q	. V	.	.	.
15.667	36.5090	96.58	. Q	. V	.	.	.
15.750	37.2014	100.53	. Q	. V	.	.	.
15.833	37.9809	113.19	. Q	. V	.	.	.
15.917	38.9233	136.84	. Q	. V	.	.	.
16.000	40.1371	176.24	. Q	. V	.	.	.
16.083	41.8549	249.42	.	. Q	. V	.	.
16.167	44.4641	378.85	.	.	. V	. Q	.
16.250	47.9163	501.27	.	.	. V	. Q	.
16.333	51.6907	548.03	.	.	. V	. Q	.
16.417	54.8513	458.93	.	.	. V	. Q	.
16.500	56.9965	311.48	.	.	. Q	. V	.
16.583	58.4460	210.47	.	. Q	. V	.	.
16.667	59.4968	152.57	. Q	.	. V	.	.
16.750	60.3102	118.11	. Q	.	. V	.	.
16.833	61.0256	103.87	. Q	.	. V	.	.
16.917	61.6804	95.07	. Q	.	. V	.	.
17.000	62.2701	85.62	. Q	.	. V	.	.
17.083	62.8071	77.97	. Q	.	. V	.	.
17.167	63.3032	72.03	. Q	.	. V	.	.
17.250	63.7671	67.36	. Q	.	. V	.	.
17.333	64.2002	62.89	. Q	.	. V	.	.
17.417	64.6069	59.05	. Q	.	. V	.	.
17.500	64.9929	56.05	. Q	.	. V	.	.
17.583	65.3623	53.64	. Q	.	. V	.	.
17.667	65.7177	51.62	. Q	.	. V	.	.
17.750	66.0613	49.88	. Q	.	. V	.	.
17.833	66.3941	48.32	. Q	.	. V	.	.
17.917	66.7170	46.89	. Q	.	. V	.	.
18.000	67.0310	45.59	. Q	.	. V	.	.
18.083	67.3355	44.22	. Q	.	. V	.	.
18.167	67.6267	42.28	. Q	.	. V	.	.
18.250	67.8995	39.60	. Q	.	. V	.	.
18.333	68.1507	36.47	. Q	.	. V	.	.
18.417	68.3833	33.78	. Q	.	. V	.	.

18.500	68.6036	31.98	. Q	.	.	.	. V	.
18.583	68.8152	30.73	. Q	.	.	.	. V	.
18.667	69.0203	29.79	. Q	.	.	.	. V	.
18.750	69.2204	29.06	. Q	.	.	.	. V	.
18.833	69.4159	28.39	. Q	.	.	.	. V	.
18.917	69.6071	27.76	. Q	.	.	.	. V	.
19.000	69.7943	27.18	. Q	.	.	.	. V	.
19.083	69.9778	26.64	. Q	.	.	.	. V	.
19.167	70.1578	26.14	. Q	.	.	.	. V	.
19.250	70.3346	25.67	. Q	.	.	.	. V	.
19.333	70.5082	25.21	. Q	.	.	.	. V	.
19.417	70.6788	24.78	. Q	.	.	.	. V	.
19.500	70.8466	24.36	. Q	.	.	.	. V	.
19.583	71.0117	23.96	. Q	.	.	.	. V	.
19.667	71.1741	23.58	. Q	.	.	.	. V	.
19.750	71.3340	23.22	. Q	.	.	.	. V	.
19.833	71.4914	22.87	. Q	.	.	.	. V	.
19.917	71.6466	22.53	. Q	.	.	.	. V	.
20.000	71.7995	22.20	. Q	.	.	.	. V	.
20.083	71.9502	21.89	. Q	.	.	.	. V	.
20.167	72.0989	21.59	. Q	.	.	.	. V	.
20.250	72.2456	21.29	. Q	.	.	.	. V	.
20.333	72.3903	21.01	. Q	.	.	.	. V	.
20.417	72.5331	20.74	. Q	.	.	.	. V	.
20.500	72.6742	20.48	. Q	.	.	.	. V	.
20.583	72.8135	20.22	. Q	.	.	.	. V	.
20.667	72.9510	19.98	. Q	.	.	.	. V	.
20.750	73.0870	19.74	. Q	.	.	.	. V	.
20.833	73.2213	19.51	. Q	.	.	.	. V	.
20.917	73.3541	19.28	. Q	.	.	.	. V	.
21.000	73.4854	19.06	. Q	.	.	.	. V	.
21.083	73.6153	18.85	. Q	.	.	.	. V	.
21.167	73.7437	18.65	. Q	.	.	.	. V	.
21.250	73.8707	18.45	. Q	.	.	.	. V	.
21.333	73.9964	18.25	. Q	.	.	.	. V	.
21.417	74.1208	18.06	. Q	.	.	.	. V	.
21.500	74.2439	17.88	. Q	.	.	.	. V	.
21.583	74.3658	17.70	. Q	.	.	.	. V	.
21.667	74.4865	17.52	. Q	.	.	.	. V	.
21.750	74.6060	17.35	. Q	.	.	.	. V	.
21.833	74.7244	17.19	. Q	.	.	.	. V	.
21.917	74.8416	17.02	. Q	.	.	.	. V	.
22.000	74.9578	16.87	. Q	.	.	.	. V	.
22.083	75.0729	16.71	. Q	.	.	.	. V	.
22.167	75.1870	16.56	. Q	.	.	.	. V	.
22.250	75.3000	16.41	. Q	.	.	.	. V	.
22.333	75.4121	16.27	. Q	.	.	.	. V	.
22.417	75.5231	16.13	. Q	.	.	.	. V	.
22.500	75.6333	15.99	. Q	.	.	.	. V	.
22.583	75.7425	15.86	. Q	.	.	.	. V	.
22.667	75.8508	15.72	. Q	.	.	.	. V	.
22.750	75.9582	15.60	. Q	.	.	.	. V	.
22.833	76.0647	15.47	. Q	.	.	.	. V	.
22.917	76.1704	15.35	. Q	.	.	.	. V	.
23.000	76.2753	15.22	. Q	.	.	.	. V	.
23.083	76.3793	15.11	. Q	.	.	.	. V	.
23.167	76.4825	14.99	. Q	.	.	.	. V	.
23.250	76.5850	14.88	. Q	.	.	.	. V	.

23.333	76.6867	14.76	Q	.	.	.	V.
23.417	76.7876	14.65	Q	.	.	.	V.
23.500	76.8878	14.55	Q	.	.	.	V.
23.583	76.9872	14.44	Q	.	.	.	V.
23.667	77.0860	14.34	Q	.	.	.	V.
23.750	77.1841	14.24	Q	.	.	.	V.
23.833	77.2814	14.14	Q	.	.	.	V.
23.917	77.3781	14.04	Q	.	.	.	V.
24.000	77.4741	13.94	Q	.	.	.	V.
24.083	77.5677	13.58	Q	.	.	.	V.
24.167	77.6515	12.17	Q	.	.	.	V.
24.250	77.7169	9.50	Q	.	.	.	V.
24.333	77.7583	6.00	Q	.	.	.	V.
24.417	77.7796	3.10	Q	.	.	.	V.
24.500	77.7900	1.51	Q	.	.	.	V.
24.583	77.7949	0.70	Q	.	.	.	V.
24.667	77.7971	0.33	Q	.	.	.	V.
24.750	77.7985	0.20	Q	.	.	.	V.
24.833	77.7993	0.12	Q	.	.	.	V.
24.917	77.7997	0.05	Q	.	.	.	V.
25.000	77.7998	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1500.0
10%	210.0
20%	60.0
30%	40.0
40%	30.0
50%	25.0
60%	20.0
70%	15.0
80%	15.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #3)

WATERSHED AREA = 117.200 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.403 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.283
LOW LOSS FRACTION = 0.564

HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.26
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.59
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.78
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.31
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 1.81
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.03

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 20.678

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.196	16.954
2	4.986	53.721
3	14.345	132.649
4	27.149	181.480
5	43.224	227.850
6	60.579	245.984
7	74.944	203.602
8	84.432	134.489
9	90.379	84.288
10	94.252	54.902
11	96.589	33.122
12	97.971	19.579
13	98.440	6.656
14	98.828	5.497
15	99.216	5.496
16	99.604	5.496
17	99.991	5.496
18	100.000	0.123

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 14.9666
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 14.5420

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	25.0	50.0	75.0	100.0
0.083	0.0002	0.03	Q	.	.	.	.
0.167	0.0010	0.12	Q	.	.	.	.
0.250	0.0034	0.35	Q	.	.	.	.
0.333	0.0080	0.66	Q	.	.	.	.
0.417	0.0152	1.05	Q	.	.	.	.
0.500	0.0253	1.47	Q	.	.	.	.
0.583	0.0379	1.83	Q	.	.	.	.
0.667	0.0521	2.06	Q	.	.	.	.
0.750	0.0673	2.21	Q	.	.	.	.
0.833	0.0833	2.31	Q	.	.	.	.
0.917	0.0996	2.38	Q	.	.	.	.
1.000	0.1163	2.42	Q	.	.	.	.
1.083	0.1331	2.44	Q	.	.	.	.
1.167	0.1500	2.46	Q	.	.	.	.
1.250	0.1670	2.47	Q	.	.	.	.
1.333	0.1842	2.49	Q	.	.	.	.
1.417	0.2015	2.51	VQ	.	.	.	.
1.500	0.2188	2.52	VQ	.	.	.	.
1.583	0.2362	2.53	VQ	.	.	.	.
1.667	0.2537	2.54	VQ	.	.	.	.
1.750	0.2712	2.55	VQ	.	.	.	.
1.833	0.2888	2.55	VQ	.	.	.	.
1.917	0.3065	2.56	VQ	.	.	.	.
2.000	0.3242	2.57	VQ	.	.	.	.
2.083	0.3420	2.58	VQ	.	.	.	.
2.167	0.3598	2.59	VQ	.	.	.	.
2.250	0.3778	2.60	.Q	.	.	.	.
2.333	0.3957	2.61	.Q	.	.	.	.
2.417	0.4138	2.62	.Q	.	.	.	.
2.500	0.4319	2.63	.Q	.	.	.	.
2.583	0.4501	2.64	.Q	.	.	.	.
2.667	0.4683	2.65	.Q	.	.	.	.
2.750	0.4866	2.66	.Q	.	.	.	.
2.833	0.5050	2.67	.Q	.	.	.	.
2.917	0.5235	2.68	.Q	.	.	.	.
3.000	0.5420	2.69	.Q	.	.	.	.
3.083	0.5606	2.70	.Q	.	.	.	.
3.167	0.5793	2.71	.Q	.	.	.	.
3.250	0.5981	2.72	.Q	.	.	.	.
3.333	0.6169	2.73	.Q	.	.	.	.
3.417	0.6358	2.74	.Q	.	.	.	.
3.500	0.6548	2.76	.Q	.	.	.	.
3.583	0.6738	2.77	.Q	.	.	.	.
3.667	0.6929	2.78	.Q	.	.	.	.
3.750	0.7122	2.79	.Q	.	.	.	.
3.833	0.7314	2.80	.QV	.	.	.	.
3.917	0.7508	2.81	.QV	.	.	.	.

4.000	0.7703	2.82	.QV	.	.	.	.
4.083	0.7898	2.84	.QV	.	.	.	.
4.167	0.8094	2.85	.QV	.	.	.	.
4.250	0.8291	2.86	.QV	.	.	.	.
4.333	0.8489	2.87	.QV	.	.	.	.
4.417	0.8687	2.88	.QV	.	.	.	.
4.500	0.8887	2.90	.QV	.	.	.	.
4.583	0.9087	2.91	.QV	.	.	.	.
4.667	0.9289	2.92	.QV	.	.	.	.
4.750	0.9491	2.94	.QV	.	.	.	.
4.833	0.9694	2.95	.QV	.	.	.	.
4.917	0.9898	2.96	.QV	.	.	.	.
5.000	1.0103	2.98	.QV	.	.	.	.
5.083	1.0309	2.99	.QV	.	.	.	.
5.167	1.0516	3.00	.QV	.	.	.	.
5.250	1.0723	3.02	.QV	.	.	.	.
5.333	1.0932	3.03	.Q V	.	.	.	.
5.417	1.1142	3.05	.Q V	.	.	.	.
5.500	1.1353	3.06	.Q V	.	.	.	.
5.583	1.1564	3.07	.Q V	.	.	.	.
5.667	1.1777	3.09	.Q V	.	.	.	.
5.750	1.1991	3.10	.Q V	.	.	.	.
5.833	1.2206	3.12	.Q V	.	.	.	.
5.917	1.2422	3.13	.Q V	.	.	.	.
6.000	1.2639	3.15	.Q V	.	.	.	.
6.083	1.2857	3.17	.Q V	.	.	.	.
6.167	1.3076	3.18	.Q V	.	.	.	.
6.250	1.3296	3.20	.Q V	.	.	.	.
6.333	1.3518	3.21	.Q V	.	.	.	.
6.417	1.3740	3.23	.Q V	.	.	.	.
6.500	1.3964	3.25	.Q V	.	.	.	.
6.583	1.4189	3.27	.Q V	.	.	.	.
6.667	1.4415	3.28	.Q V	.	.	.	.
6.750	1.4642	3.30	.Q V	.	.	.	.
6.833	1.4871	3.32	.Q V	.	.	.	.
6.917	1.5100	3.34	.Q V	.	.	.	.
7.000	1.5332	3.35	.Q V	.	.	.	.
7.083	1.5564	3.37	.Q V	.	.	.	.
7.167	1.5797	3.39	.Q V	.	.	.	.
7.250	1.6032	3.41	.Q V	.	.	.	.
7.333	1.6269	3.43	.Q V	.	.	.	.
7.417	1.6506	3.45	.Q V	.	.	.	.
7.500	1.6745	3.47	.Q V	.	.	.	.
7.583	1.6986	3.49	.Q V	.	.	.	.
7.667	1.7228	3.51	.Q V	.	.	.	.
7.750	1.7471	3.53	.Q V	.	.	.	.
7.833	1.7716	3.55	.Q V	.	.	.	.
7.917	1.7962	3.58	.Q V	.	.	.	.
8.000	1.8210	3.60	.Q V	.	.	.	.
8.083	1.8459	3.62	.Q V	.	.	.	.
8.167	1.8710	3.64	.Q V	.	.	.	.
8.250	1.8962	3.67	.Q V	.	.	.	.
8.333	1.9216	3.69	.Q V	.	.	.	.
8.417	1.9472	3.71	.Q V	.	.	.	.
8.500	1.9729	3.74	.Q V	.	.	.	.
8.583	1.9988	3.76	.Q V	.	.	.	.
8.667	2.0249	3.79	.Q V	.	.	.	.
8.750	2.0512	3.81	.Q V	.	.	.	.

8.833	2.0776	3.84	.Q	V	.	.	.	.
8.917	2.1042	3.86	.Q	V	.	.	.	.
9.000	2.1310	3.89	.Q	V	.	.	.	.
9.083	2.1580	3.92	.Q	V	.	.	.	.
9.167	2.1852	3.95	.Q	V	.	.	.	.
9.250	2.2126	3.98	.Q	V	.	.	.	.
9.333	2.2402	4.00	.Q	V	.	.	.	.
9.417	2.2679	4.03	.Q	V	.	.	.	.
9.500	2.2959	4.06	.Q	V	.	.	.	.
9.583	2.3241	4.09	.Q	V	.	.	.	.
9.667	2.3525	4.13	.Q	V	.	.	.	.
9.750	2.3812	4.16	.Q	V	.	.	.	.
9.833	2.4100	4.19	.Q	V	.	.	.	.
9.917	2.4391	4.22	.Q	V	.	.	.	.
10.000	2.4684	4.26	.Q	V	.	.	.	.
10.083	2.4980	4.29	.Q	V	.	.	.	.
10.167	2.5278	4.33	.Q	V	.	.	.	.
10.250	2.5579	4.36	.Q	V	.	.	.	.
10.333	2.5882	4.40	.Q	V	.	.	.	.
10.417	2.6187	4.44	.Q	V	.	.	.	.
10.500	2.6496	4.48	.Q	V	.	.	.	.
10.583	2.6807	4.52	.Q	V	.	.	.	.
10.667	2.7121	4.56	.Q	V	.	.	.	.
10.750	2.7438	4.60	.Q	V	.	.	.	.
10.833	2.7757	4.64	.Q	V	.	.	.	.
10.917	2.8080	4.68	.Q	V	.	.	.	.
11.000	2.8405	4.73	.Q	V	.	.	.	.
11.083	2.8734	4.77	.Q	V	.	.	.	.
11.167	2.9066	4.82	.Q	V	.	.	.	.
11.250	2.9402	4.87	.Q	V	.	.	.	.
11.333	2.9741	4.92	.Q	V	.	.	.	.
11.417	3.0083	4.97	.Q	V	.	.	.	.
11.500	3.0429	5.02	.Q	V	.	.	.	.
11.583	3.0778	5.07	.Q	V	.	.	.	.
11.667	3.1131	5.13	.Q	V	.	.	.	.
11.750	3.1489	5.19	.Q	V	.	.	.	.
11.833	3.1850	5.24	.Q	V	.	.	.	.
11.917	3.2215	5.30	.Q	V	.	.	.	.
12.000	3.2585	5.37	.Q	V	.	.	.	.
12.083	3.2960	5.45	.Q	V	.	.	.	.
12.167	3.3343	5.57	.Q	V	.	.	.	.
12.250	3.3742	5.78	.Q	V	.	.	.	.
12.333	3.4159	6.05	.Q	V	.	.	.	.
12.417	3.4598	6.37	.Q	V	.	.	.	.
12.500	3.5060	6.72	.Q	V	.	.	.	.
12.583	3.5544	7.02	.Q	V	.	.	.	.
12.667	3.6043	7.25	.Q	V	.	.	.	.
12.750	3.6555	7.43	.Q	V	.	.	.	.
12.833	3.7077	7.58	.Q	V	.	.	.	.
12.917	3.7608	7.71	.Q	V	.	.	.	.
13.000	3.8147	7.83	.Q	V	.	.	.	.
13.083	3.8694	7.94	.Q	V	.	.	.	.
13.167	3.9248	8.05	.Q	V	.	.	.	.
13.250	3.9810	8.16	.Q	V	.	.	.	.
13.333	4.0381	8.28	.Q	.V	.	.	.	.
13.417	4.0960	8.41	.Q	.V	.	.	.	.
13.500	4.1547	8.53	.Q	.V	.	.	.	.
13.583	4.2144	8.66	.Q	.V	.	.	.	.

13.667	4.2749	8.79	.Q	.V	.	.	.	.
13.750	4.3365	8.94	.Q	.V	.	.	.	.
13.833	4.3990	9.08	.Q	.V	.	.	.	.
13.917	4.4626	9.24	.Q	.V	.	.	.	.
14.000	4.5274	9.40	.Q	.V	.	.	.	.
14.083	4.5934	9.58	.Q	.V	.	.	.	.
14.167	4.6609	9.80	.Q	.V	.	.	.	.
14.250	4.7304	10.09	.Q	.V	.	.	.	.
14.333	4.8022	10.42	.Q	.V	.	.	.	.
14.417	4.8766	10.80	.Q	.V	.	.	.	.
14.500	4.9538	11.21	.Q	.V	.	.	.	.
14.583	5.0336	11.60	.Q	.V	.	.	.	.
14.667	5.1159	11.95	.Q	.V	.	.	.	.
14.750	5.2006	12.30	.Q	.V	.	.	.	.
14.833	5.2876	12.63	.Q	.V	.	.	.	.
14.917	5.3771	12.99	.Q	.V	.	.	.	.
15.000	5.4690	13.35	.Q	.V	.	.	.	.
15.083	5.5637	13.75	.Q	.V	.	.	.	.
15.167	5.6613	14.17	.Q	.V	.	.	.	.
15.250	5.7621	14.64	.Q	.V	.	.	.	.
15.333	5.8666	15.16	.Q	.V	.	.	.	.
15.417	5.9747	15.70	.Q	.V	.	.	.	.
15.500	6.0863	16.19	.Q	.V	.	.	.	.
15.583	6.2002	16.55	.Q	.V	.	.	.	.
15.667	6.3164	16.86	.Q	.V	.	.	.	.
15.750	6.4354	17.29	.Q	.V	.	.	.	.
15.833	6.5599	18.07	.Q	.V	.	.	.	.
15.917	6.6977	20.01	.Q	.V	.	.	.	.
16.000	6.8621	23.88	.Q	.V	.	.	.	.
16.083	7.0909	33.22	.Q	.V	.	.	.	.
16.167	7.4212	47.96	.	.QV	.	.	.	.
16.250	7.8982	69.26	.	.V	.Q	.	.	.
16.333	8.4708	83.15	.	.V	.Q	.	.	.
16.417	9.1068	92.35	.	.V	.Q	.	.	.
16.500	9.7386	91.73	.	.V	.Q	.	.	.
16.583	10.2715	77.38	.	.V	.Q	.	.	.
16.667	10.6702	57.89	.	.Q	.V	.	.	.
16.750	10.9664	43.02	.	.Q	.V	.	.	.
16.833	11.1967	33.44	.Q	.V	.	.	.	.
16.917	11.3782	26.35	.Q	.V	.	.	.	.
17.000	11.5260	21.46	.Q	.V	.	.	.	.
17.083	11.6466	17.51	.Q	.V	.	.	.	.
17.167	11.7574	16.10	.Q	.V	.	.	.	.
17.250	11.8617	15.14	.Q	.V	.	.	.	.
17.333	11.9593	14.17	.Q	.V	.	.	.	.
17.417	12.0496	13.12	.Q	.V	.	.	.	.
17.500	12.1274	11.29	.Q	.V	.	.	.	.
17.583	12.2001	10.56	.Q	.V	.	.	.	.
17.667	12.2692	10.03	.Q	.V	.	.	.	.
17.750	12.3354	9.61	.Q	.V	.	.	.	.
17.833	12.3990	9.23	.Q	.V	.	.	.	.
17.917	12.4603	8.90	.Q	.V	.	.	.	.
18.000	12.5196	8.61	.Q	.V	.	.	.	.
18.083	12.5770	8.34	.Q	.V	.	.	.	.
18.167	12.6324	8.04	.Q	.V	.	.	.	.
18.250	12.6853	7.68	.Q	.V	.	.	.	.
18.333	12.7355	7.29	.Q	.V	.	.	.	.
18.417	12.7827	6.86	.Q	.V	.	.	.	.

18.500	12.8270	6.42	.Q	.	.	.	V	.
18.583	12.8686	6.05	.Q	.	.	.	V	.
18.667	12.9083	5.76	.Q	.	.	.	V	.
18.750	12.9464	5.53	.Q	.	.	.	V	.
18.833	12.9832	5.35	.Q	.	.	.	V	.
18.917	13.0190	5.20	.Q	.	.	.	V	.
19.000	13.0539	5.07	.Q	.	.	.	V	.
19.083	13.0880	4.95	.Q	.	.	.	V	.
19.167	13.1214	4.85	.Q	.	.	.	V	.
19.250	13.1541	4.75	.Q	.	.	.	V	.
19.333	13.1862	4.66	.Q	.	.	.	V	.
19.417	13.2176	4.56	.Q	.	.	.	V	.
19.500	13.2485	4.48	.Q	.	.	.	V	.
19.583	13.2789	4.41	.Q	.	.	.	V	.
19.667	13.3087	4.33	.Q	.	.	.	V	.
19.750	13.3381	4.26	.Q	.	.	.	V	.
19.833	13.3670	4.20	.Q	.	.	.	V	.
19.917	13.3954	4.13	.Q	.	.	.	V	.
20.000	13.4234	4.07	.Q	.	.	.	V	.
20.083	13.4510	4.01	.Q	.	.	.	V	.
20.167	13.4782	3.95	.Q	.	.	.	V	.
20.250	13.5050	3.89	.Q	.	.	.	V	.
20.333	13.5315	3.84	.Q	.	.	.	V	.
20.417	13.5576	3.79	.Q	.	.	.	V	.
20.500	13.5834	3.74	.Q	.	.	.	V	.
20.583	13.6088	3.69	.Q	.	.	.	V	.
20.667	13.6339	3.64	.Q	.	.	.	V	.
20.750	13.6587	3.60	.Q	.	.	.	V	.
20.833	13.6832	3.56	.Q	.	.	.	V	.
20.917	13.7074	3.51	.Q	.	.	.	V	.
21.000	13.7313	3.47	.Q	.	.	.	V	.
21.083	13.7549	3.43	.Q	.	.	.	V	.
21.167	13.7783	3.39	.Q	.	.	.	V	.
21.250	13.8014	3.36	.Q	.	.	.	V	.
21.333	13.8243	3.32	.Q	.	.	.	V	.
21.417	13.8469	3.28	.Q	.	.	.	V	.
21.500	13.8692	3.25	.Q	.	.	.	V	.
21.583	13.8914	3.22	.Q	.	.	.	V	.
21.667	13.9133	3.18	.Q	.	.	.	V	.
21.750	13.9350	3.15	.Q	.	.	.	V	.
21.833	13.9565	3.12	.Q	.	.	.	V	.
21.917	13.9778	3.09	.Q	.	.	.	V	.
22.000	13.9989	3.06	.Q	.	.	.	V	.
22.083	14.0197	3.03	.Q	.	.	.	V	.
22.167	14.0404	3.00	.Q	.	.	.	V	.
22.250	14.0609	2.98	.Q	.	.	.	V	.
22.333	14.0812	2.95	.Q	.	.	.	V	.
22.417	14.1014	2.92	.Q	.	.	.	V	.
22.500	14.1213	2.90	.Q	.	.	.	V	.
22.583	14.1411	2.87	.Q	.	.	.	V	.
22.667	14.1607	2.85	.Q	.	.	.	V	.
22.750	14.1802	2.82	.Q	.	.	.	V	.
22.833	14.1995	2.80	.Q	.	.	.	V	.
22.917	14.2186	2.78	.Q	.	.	.	V	.
23.000	14.2376	2.76	.Q	.	.	.	V	.
23.083	14.2564	2.73	.Q	.	.	.	V	.
23.167	14.2751	2.71	.Q	.	.	.	V	.
23.250	14.2936	2.69	.Q	.	.	.	V	.

23.333	14.3120	2.67	.Q	.	.	.	V	.
23.417	14.3303	2.65	.Q	.	.	.	V	.
23.500	14.3484	2.63	.Q	.	.	.	V	.
23.583	14.3664	2.61	.Q	.	.	.	V	.
23.667	14.3842	2.59	.Q	.	.	.	V	.
23.750	14.4019	2.57	.Q	.	.	.	V	.
23.833	14.4195	2.55	.Q	.	.	.	V	.
23.917	14.4370	2.54	.Q	.	.	.	V	.
24.000	14.4543	2.52	.Q	.	.	.	V	.
24.083	14.4714	2.47	Q	.	.	.	V	.
24.167	14.4876	2.36	Q	.	.	.	V	.
24.250	14.5023	2.12	Q	.	.	.	V	.
24.333	14.5146	1.80	Q	.	.	.	V	.
24.417	14.5243	1.40	Q	.	.	.	V	.
24.500	14.5309	0.97	Q	.	.	.	V	.
24.583	14.5352	0.62	Q	.	.	.	V	.
24.667	14.5378	0.38	Q	.	.	.	V	.
24.750	14.5395	0.24	Q	.	.	.	V	.
24.833	14.5404	0.14	Q	.	.	.	V	.
24.917	14.5410	0.08	Q	.	.	.	V	.
25.000	14.5413	0.05	Q	.	.	.	V	.
25.083	14.5416	0.04	Q	.	.	.	V	.
25.167	14.5418	0.03	Q	.	.	.	V	.
25.250	14.5419	0.02	Q	.	.	.	V	.
25.333	14.5420	0.01	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1520.0
10%	235.0
20%	70.0
30%	50.0
40%	40.0
50%	35.0
60%	30.0
70%	25.0
80%	20.0
90%	15.0

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

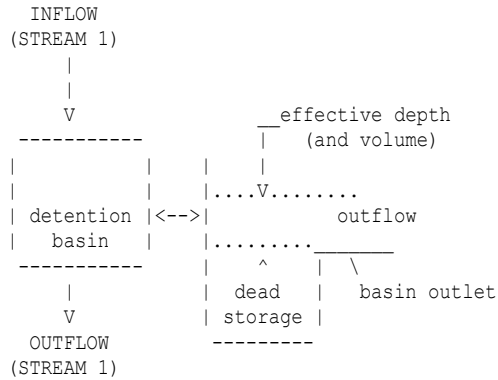
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<
=====

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

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

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

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

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

=====

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH (FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME (AF)
0.083	0.000	0.68	0.00	0.00	0.0	0.005
0.167	0.000	3.72	0.00	0.02	0.0	0.030
0.250	0.000	10.10	0.00	0.05	0.0	0.100
0.333	0.000	18.62	0.00	0.11	0.0	0.228
0.417	0.000	27.10	0.00	0.21	0.0	0.415
0.500	0.000	32.90	0.00	0.32	0.0	0.641
0.583	0.000	36.26	0.00	0.45	0.0	0.891
0.667	0.000	38.17	0.00	0.58	0.0	1.154
0.750	0.000	39.18	0.00	0.71	0.0	1.424
0.833	0.000	39.73	0.00	0.85	0.0	1.697
0.917	0.000	40.11	0.00	0.99	0.0	1.973
1.000	0.000	40.43	0.00	1.06	0.0	2.252
1.083	0.000	40.69	0.00	1.13	0.0	2.532
1.167	0.000	40.89	0.00	1.20	0.0	2.813
1.250	0.000	41.05	0.00	1.27	0.0	3.096
1.333	0.000	41.20	0.00	1.34	0.0	3.380
1.417	0.000	41.36	0.00	1.42	0.0	3.664
1.500	0.000	41.50	0.00	1.49	0.0	3.950
1.583	0.000	41.65	0.00	1.56	0.0	4.237
1.667	0.000	41.80	0.00	1.63	0.0	4.525
1.750	0.000	41.95	0.00	1.70	0.0	4.813
1.833	0.000	42.10	0.00	1.78	0.0	5.103
1.917	0.000	42.25	0.00	1.85	0.0	5.394
2.000	0.000	42.40	0.00	1.92	0.0	5.686
2.083	0.000	42.56	0.00	1.99	0.0	5.979
2.167	0.000	42.71	0.00	2.04	0.0	6.273
2.250	0.000	42.87	0.00	2.08	0.0	6.568
2.333	0.000	43.03	0.00	2.12	0.0	6.864
2.417	0.000	43.19	0.00	2.17	0.0	7.161
2.500	0.000	43.35	0.00	2.21	0.0	7.460
2.583	0.000	43.52	0.00	2.25	0.0	7.759
2.667	0.000	43.68	0.00	2.29	0.0	8.060
2.750	0.000	43.85	0.00	2.34	0.0	8.362
2.833	0.000	44.02	0.00	2.38	0.0	8.665
2.917	0.000	44.19	0.00	2.42	0.0	8.969
3.000	0.000	44.36	0.00	2.47	0.0	9.274
3.083	0.000	44.54	0.00	2.51	0.0	9.581
3.167	0.000	44.71	0.00	2.56	0.0	9.889
3.250	0.000	44.89	0.00	2.60	0.0	10.198
3.333	0.000	45.07	0.00	2.64	0.0	10.508
3.417	0.000	45.25	0.00	2.69	0.0	10.819
3.500	0.000	45.43	0.00	2.73	0.0	11.132
3.583	0.000	45.62	0.00	2.78	0.0	11.446
3.667	0.000	45.81	0.00	2.82	0.0	11.761
3.750	0.000	46.00	0.00	2.87	0.0	12.078
3.833	0.000	46.19	0.00	2.91	0.0	12.396
3.917	0.000	46.38	0.00	2.96	0.0	12.715

4.000	0.000	46.58	0.00	3.00	0.0	13.035
4.083	0.000	46.77	0.00	3.04	0.0	13.357
4.167	0.000	46.97	0.00	3.09	0.0	13.681
4.250	0.000	47.17	0.00	3.13	0.0	14.005
4.333	0.000	47.38	0.00	3.17	0.0	14.331
4.417	0.000	47.59	0.00	3.21	0.0	14.659
4.500	0.000	47.79	0.00	3.25	0.0	14.988
4.583	0.000	48.01	0.00	3.29	0.0	15.318
4.667	0.000	48.22	0.00	3.33	0.0	15.650
4.750	0.000	48.44	0.00	3.37	0.0	15.983
4.833	0.000	48.65	0.00	3.41	0.0	16.318
4.917	0.000	48.88	0.00	3.46	0.0	16.654
5.000	0.000	49.10	0.00	3.50	0.0	16.992
5.083	0.000	49.33	0.00	3.54	0.0	17.332
5.167	0.000	49.55	0.00	3.58	0.0	17.673
5.250	0.000	49.79	0.00	3.63	0.0	18.015
5.333	0.000	50.02	0.00	3.67	0.0	18.360
5.417	0.000	50.26	0.00	3.71	0.0	18.705
5.500	0.000	50.50	0.00	3.76	0.0	19.053
5.583	0.000	50.75	0.00	3.80	0.0	19.402
5.667	0.000	50.99	0.00	3.84	0.0	19.753
5.750	0.000	51.24	0.00	3.89	0.0	20.106
5.833	0.000	51.50	0.00	3.93	0.0	20.460
5.917	0.000	51.75	0.00	3.98	0.0	20.816
6.000	0.000	52.01	0.00	4.02	0.0	21.174
6.083	0.000	52.28	0.00	4.06	0.0	21.534
6.167	0.000	52.54	0.00	4.10	0.0	21.895
6.250	0.000	52.81	0.00	4.14	0.0	22.259
6.333	0.000	53.09	0.00	4.18	0.0	22.624
6.417	0.000	53.37	0.00	4.22	0.0	22.991
6.500	0.000	53.65	0.00	4.26	0.0	23.360
6.583	0.000	53.93	0.00	4.30	0.0	23.732
6.667	0.000	54.22	0.00	4.34	0.0	24.105
6.750	0.000	54.52	0.00	4.39	0.0	24.480
6.833	0.000	54.81	0.00	4.43	0.0	24.857
6.917	0.000	55.12	0.00	4.47	0.0	25.236
7.000	0.000	55.42	0.00	4.51	0.0	25.617
7.083	0.000	55.73	0.00	4.56	0.0	26.001
7.167	0.000	56.05	0.00	4.60	0.1	26.387
7.250	0.000	56.37	0.00	4.64	0.1	26.774
7.333	0.000	56.69	0.00	4.68	0.1	27.165
7.417	0.000	57.02	0.00	4.73	0.1	27.557
7.500	0.000	57.35	0.00	4.77	0.1	27.952
7.583	0.000	57.70	0.00	4.82	0.1	28.349
7.667	0.000	58.04	0.00	4.86	0.1	28.748
7.750	0.000	58.39	0.00	4.91	0.1	29.150
7.833	0.000	58.75	0.00	4.95	0.1	29.554
7.917	0.000	59.11	0.00	5.00	0.1	29.961
8.000	0.000	59.48	0.00	5.03	0.1	30.370
8.083	0.000	59.85	0.00	5.07	0.1	30.782
8.167	0.000	60.23	0.00	5.11	0.1	31.196
8.250	0.000	60.62	0.00	5.15	0.1	31.613
8.333	0.000	61.01	0.00	5.18	0.1	32.033
8.417	0.000	61.41	0.00	5.22	0.1	32.455
8.500	0.000	61.81	0.00	5.26	0.1	32.881
8.583	0.000	62.23	0.00	5.30	0.1	33.309
8.667	0.000	62.65	0.00	5.34	0.1	33.740
8.750	0.000	63.08	0.00	5.38	0.1	34.174

8.833	0.000	63.51	0.00	5.42	0.1	34.611
8.917	0.000	63.96	0.00	5.46	0.1	35.051
9.000	0.000	64.41	0.00	5.50	0.1	35.494
9.083	0.000	64.87	0.00	5.54	0.1	35.941
9.167	0.000	65.33	0.00	5.58	0.1	36.390
9.250	0.000	65.81	0.00	5.62	0.1	36.843
9.333	0.000	66.30	0.00	5.66	0.1	37.299
9.417	0.000	66.80	0.00	5.71	0.1	37.759
9.500	0.000	67.30	0.00	5.75	0.1	38.222
9.583	0.000	67.82	0.00	5.79	0.1	38.688
9.667	0.000	68.34	0.00	5.83	0.1	39.159
9.750	0.000	68.88	0.00	5.88	0.1	39.633
9.833	0.000	69.43	0.00	5.92	0.1	40.110
9.917	0.000	69.99	0.00	5.96	0.1	40.592
10.000	0.000	70.56	0.00	6.01	0.3	41.076
10.083	0.000	71.14	0.00	6.05	1.7	41.554
10.167	0.000	71.74	0.00	6.08	4.1	42.020
10.250	0.000	72.35	0.00	6.12	6.5	42.473
10.333	0.000	72.97	0.00	6.16	8.8	42.915
10.417	0.000	73.61	0.00	6.20	11.1	43.346
10.500	0.000	74.26	0.00	6.23	13.3	43.766
10.583	0.000	74.93	0.00	6.26	15.4	44.176
10.667	0.000	75.61	0.00	6.30	17.5	44.576
10.750	0.000	76.31	0.00	6.33	19.5	44.967
10.833	0.000	77.03	0.00	6.36	21.5	45.350
10.917	0.000	77.76	0.00	6.39	23.5	45.724
11.000	0.000	78.51	0.00	6.42	25.4	46.089
11.083	0.000	79.29	0.00	6.45	27.3	46.448
11.167	0.000	80.08	0.00	6.48	29.1	46.799
11.250	0.000	80.89	0.00	6.51	30.9	47.143
11.333	0.000	81.72	0.00	6.54	32.6	47.481
11.417	0.000	82.58	0.00	6.57	34.4	47.813
11.500	0.000	83.46	0.00	6.59	36.1	48.140
11.583	0.000	84.37	0.00	6.62	37.7	48.461
11.667	0.000	85.30	0.00	6.65	39.4	48.777
11.750	0.000	86.26	0.00	6.67	41.0	49.089
11.833	0.000	87.25	0.00	6.70	42.6	49.396
11.917	0.000	88.27	0.00	6.72	44.2	49.700
12.000	0.000	89.31	0.00	6.75	45.7	50.000
12.083	0.000	90.83	0.00	6.77	47.3	50.300
12.167	0.000	93.88	0.00	6.80	48.9	50.610
12.250	0.000	99.11	0.00	6.83	50.5	50.944
12.333	0.000	105.74	0.00	6.86	52.3	51.312
12.417	0.000	112.39	0.00	6.89	54.3	51.712
12.500	0.000	117.36	0.00	6.93	56.4	52.132
12.583	0.000	120.83	0.00	6.96	58.6	52.560
12.667	0.000	123.40	0.00	7.00	60.8	52.991
12.750	0.000	125.47	0.00	7.03	65.4	53.405
12.833	0.000	127.29	0.00	7.06	71.9	53.786
12.917	0.000	129.06	0.00	7.09	78.1	54.137
13.000	0.000	130.84	0.00	7.11	83.7	54.462
13.083	0.000	132.66	0.00	7.14	88.9	54.763
13.167	0.000	134.50	0.00	7.16	93.8	55.044
13.250	0.000	136.39	0.00	7.18	98.3	55.306
13.333	0.000	138.35	0.00	7.20	102.6	55.553
13.417	0.000	140.40	0.00	7.21	106.6	55.786
13.500	0.000	142.53	0.00	7.23	110.4	56.007
13.583	0.000	144.76	0.00	7.25	114.0	56.219

13.667	0.000	147.08	0.00	7.26	117.4	56.424
13.750	0.000	149.53	0.00	7.28	120.8	56.621
13.833	0.000	152.09	0.00	7.29	124.1	56.814
13.917	0.000	154.79	0.00	7.31	127.3	57.004
14.000	0.000	157.63	0.00	7.32	130.4	57.192
14.083	0.000	160.92	0.00	7.34	133.5	57.380
14.167	0.000	165.35	0.00	7.35	136.8	57.577
14.250	0.000	171.38	0.00	7.37	140.2	57.792
14.333	0.000	178.49	0.00	7.39	144.0	58.030
14.417	0.000	185.82	0.00	7.41	148.1	58.289
14.500	0.000	192.25	0.00	7.43	152.6	58.563
14.583	0.000	197.96	0.00	7.45	157.2	58.843
14.667	0.000	203.34	0.00	7.47	161.9	59.129
14.750	0.000	208.72	0.00	7.49	166.7	59.418
14.833	0.000	214.29	0.00	7.52	171.6	59.712
14.917	0.000	220.26	0.00	7.54	176.6	60.013
15.000	0.000	226.71	0.00	7.56	181.7	60.323
15.083	0.000	233.79	0.00	7.59	186.9	60.646
15.167	0.000	241.51	0.00	7.61	192.4	60.984
15.250	0.000	250.17	0.00	7.64	198.3	61.341
15.333	0.000	259.99	0.00	7.67	204.4	61.724
15.417	0.000	270.21	0.00	7.70	211.0	62.132
15.500	0.000	277.76	0.00	7.73	217.9	62.544
15.583	0.000	281.22	0.00	7.76	224.6	62.934
15.667	0.000	283.58	0.00	7.79	230.9	63.297
15.750	0.000	292.66	0.00	7.82	237.1	63.680
15.833	0.000	320.71	0.00	7.86	244.6	64.204
15.917	0.000	376.51	0.00	7.93	256.0	65.034
16.000	0.000	469.38	0.00	8.03	275.8	66.367
16.083	0.000	647.49	0.00	8.20	318.7	68.632
16.167	0.000	946.85	0.00	8.49	398.6	72.408
16.250	0.000	1266.98	0.00	8.89	516.9	77.574
16.333	0.000	1415.19	0.00	9.30	649.5	82.847
16.417	0.000	1318.26	0.00	9.59	759.3	86.696
16.500	0.000	1007.53	0.00	9.69	820.0	87.988
16.583	0.000	720.74	0.00	9.64	826.6	87.258
16.667	0.000	529.73	0.00	9.49	796.3	85.422
16.750	0.000	409.02	0.00	9.31	747.2	83.093
16.833	0.000	336.93	0.00	9.13	690.9	80.656
16.917	0.000	295.49	0.00	8.95	633.6	78.327
17.000	0.000	268.07	0.00	8.78	577.0	76.199
17.083	0.000	244.19	0.00	8.64	523.4	74.276
17.167	0.000	223.65	0.00	8.50	475.1	72.544
17.250	0.000	206.59	0.00	8.38	431.7	70.994
17.333	0.000	191.88	0.00	8.28	392.8	69.610
17.417	0.000	179.64	0.00	8.18	358.3	68.380
17.500	0.000	168.81	0.00	8.10	327.5	67.287
17.583	0.000	160.84	0.00	8.03	300.3	66.326
17.667	0.000	154.28	0.00	7.96	278.9	65.468
17.750	0.000	148.71	0.00	7.90	263.5	64.677
17.833	0.000	143.81	0.00	7.84	250.8	63.941
17.917	0.000	139.40	0.00	7.79	238.9	63.255
18.000	0.000	135.38	0.00	7.74	227.9	62.618
18.083	0.000	131.27	0.00	7.69	217.6	62.024
18.167	0.000	125.96	0.00	7.65	207.9	61.460
18.250	0.000	118.79	0.00	7.61	198.6	60.910
18.333	0.000	110.51	0.00	7.57	189.5	60.366
18.417	0.000	102.50	0.00	7.53	180.5	59.829

18.500	0.000	96.43	0.00	7.49	171.7	59.311
18.583	0.000	92.09	0.00	7.45	163.2	58.821
18.667	0.000	88.84	0.00	7.41	155.3	58.363
18.750	0.000	86.30	0.00	7.38	148.0	57.938
18.833	0.000	84.16	0.00	7.35	141.1	57.545
18.917	0.000	82.24	0.00	7.32	134.8	57.183
19.000	0.000	80.46	0.00	7.30	129.0	56.849
19.083	0.000	78.80	0.00	7.27	123.7	56.540
19.167	0.000	77.26	0.00	7.25	118.7	56.254
19.250	0.000	75.82	0.00	7.23	114.1	55.990
19.333	0.000	74.45	0.00	7.21	109.9	55.746
19.417	0.000	73.14	0.00	7.19	106.0	55.520
19.500	0.000	71.90	0.00	7.18	102.3	55.311
19.583	0.000	70.71	0.00	7.16	98.9	55.116
19.667	0.000	69.57	0.00	7.15	95.8	54.936
19.750	0.000	68.48	0.00	7.14	92.9	54.767
19.833	0.000	67.43	0.00	7.12	90.2	54.611
19.917	0.000	66.42	0.00	7.11	87.7	54.464
20.000	0.000	65.45	0.00	7.10	85.3	54.328
20.083	0.000	64.51	0.00	7.09	83.1	54.200
20.167	0.000	63.61	0.00	7.08	81.0	54.080
20.250	0.000	62.75	0.00	7.07	79.1	53.967
20.333	0.000	61.91	0.00	7.07	77.3	53.861
20.417	0.000	61.10	0.00	7.06	75.5	53.762
20.500	0.000	60.32	0.00	7.05	73.9	53.668
20.583	0.000	59.56	0.00	7.04	72.4	53.580
20.667	0.000	58.83	0.00	7.04	71.0	53.496
20.750	0.000	58.12	0.00	7.03	69.6	53.417
20.833	0.000	57.43	0.00	7.03	68.3	53.342
20.917	0.000	56.76	0.00	7.02	67.1	53.270
21.000	0.000	56.11	0.00	7.02	65.9	53.203
21.083	0.000	55.49	0.00	7.01	64.8	53.138
21.167	0.000	54.87	0.00	7.01	63.8	53.077
21.250	0.000	54.28	0.00	7.00	62.8	53.018
21.333	0.000	53.70	0.00	7.00	62.1	52.961
21.417	0.000	53.14	0.00	6.99	61.6	52.902
21.500	0.000	52.60	0.00	6.99	61.3	52.842
21.583	0.000	52.06	0.00	6.98	61.0	52.780
21.667	0.000	51.55	0.00	6.98	60.7	52.717
21.750	0.000	51.04	0.00	6.97	60.4	52.653
21.833	0.000	50.55	0.00	6.97	60.0	52.587
21.917	0.000	50.07	0.00	6.96	59.7	52.521
22.000	0.000	49.60	0.00	6.95	59.4	52.454
22.083	0.000	49.14	0.00	6.95	59.0	52.386
22.167	0.000	48.69	0.00	6.94	58.7	52.317
22.250	0.000	48.26	0.00	6.94	58.3	52.248
22.333	0.000	47.83	0.00	6.93	57.9	52.179
22.417	0.000	47.42	0.00	6.93	57.6	52.109
22.500	0.000	47.01	0.00	6.92	57.2	52.038
22.583	0.000	46.61	0.00	6.91	56.9	51.968
22.667	0.000	46.22	0.00	6.91	56.5	51.897
22.750	0.000	45.84	0.00	6.90	56.1	51.826
22.833	0.000	45.47	0.00	6.90	55.8	51.755
22.917	0.000	45.10	0.00	6.89	55.4	51.684
23.000	0.000	44.74	0.00	6.88	55.0	51.614
23.083	0.000	44.39	0.00	6.88	54.7	51.543
23.167	0.000	44.05	0.00	6.87	54.3	51.472
23.250	0.000	43.71	0.00	6.87	53.9	51.402

23.333	0.000	43.38	0.00	6.86	53.6	51.332
23.417	0.000	43.06	0.00	6.86	53.2	51.262
23.500	0.000	42.74	0.00	6.85	52.8	51.192
23.583	0.000	42.43	0.00	6.84	52.5	51.123
23.667	0.000	42.12	0.00	6.84	52.1	51.054
23.750	0.000	41.82	0.00	6.83	51.8	50.985
23.833	0.000	41.53	0.00	6.83	51.4	50.917
23.917	0.000	41.24	0.00	6.82	51.1	50.850
24.000	0.000	40.96	0.00	6.82	50.7	50.782
24.083	0.000	40.00	0.00	6.81	50.4	50.711
24.167	0.000	36.70	0.00	6.80	49.9	50.620
24.250	0.000	30.10	0.00	6.79	49.4	50.487
24.333	0.000	21.42	0.00	6.77	48.5	50.300
24.417	0.000	12.87	0.00	6.76	47.5	50.062
24.500	0.000	7.09	0.00	6.73	46.1	49.793
24.583	0.000	3.79	0.00	6.71	44.7	49.511
24.667	0.000	1.99	0.00	6.69	43.3	49.227
24.750	0.000	1.09	0.00	6.66	41.8	48.946
24.833	0.000	0.66	0.00	6.64	40.4	48.673
24.917	0.000	0.41	0.00	6.62	39.0	48.407
25.000	0.000	0.22	0.00	6.60	37.6	48.150
25.083	0.000	0.10	0.00	6.58	36.3	47.900
25.167	0.000	0.04	0.00	6.55	35.1	47.659
25.250	0.000	0.02	0.00	6.54	33.8	47.426
25.333	0.000	0.01	0.00	6.52	32.7	47.201
25.417	0.000	0.00	0.00	6.50	31.5	46.984
25.500	0.000	0.00	0.00	6.48	30.4	46.775
25.583	0.000	0.00	0.00	6.46	29.3	46.573
25.667	0.000	0.00	0.00	6.45	28.3	46.378
25.750	0.000	0.00	0.00	6.43	27.3	46.189
25.833	0.000	0.00	0.00	6.42	26.4	46.008
25.917	0.000	0.00	0.00	6.40	25.5	45.832
26.000	0.000	0.00	0.00	6.39	24.6	45.663
26.083	0.000	0.00	0.00	6.37	23.7	45.500
26.167	0.000	0.00	0.00	6.36	22.9	45.342
26.250	0.000	0.00	0.00	6.35	22.1	45.190
26.333	0.000	0.00	0.00	6.34	21.3	45.043
26.417	0.000	0.00	0.00	6.33	20.6	44.902
26.500	0.000	0.00	0.00	6.31	19.9	44.765
26.583	0.000	0.00	0.00	6.30	19.2	44.633
26.667	0.000	0.00	0.00	6.29	18.5	44.506
26.750	0.000	0.00	0.00	6.28	17.8	44.383
26.833	0.000	0.00	0.00	6.27	17.2	44.264
26.917	0.000	0.00	0.00	6.26	16.6	44.150
27.000	0.000	0.00	0.00	6.25	16.0	44.039
27.083	0.000	0.00	0.00	6.24	15.5	43.933
27.167	0.000	0.00	0.00	6.24	14.9	43.830
27.250	0.000	0.00	0.00	6.23	14.4	43.731
27.333	0.000	0.00	0.00	6.22	13.9	43.635
27.417	0.000	0.00	0.00	6.21	13.4	43.542
27.500	0.000	0.00	0.00	6.20	13.0	43.453
27.583	0.000	0.00	0.00	6.20	12.5	43.367
27.667	0.000	0.00	0.00	6.19	12.1	43.284
27.750	0.000	0.00	0.00	6.18	11.6	43.204
27.833	0.000	0.00	0.00	6.18	11.2	43.126
27.917	0.000	0.00	0.00	6.17	10.8	43.052
28.000	0.000	0.00	0.00	6.16	10.5	42.979
28.083	0.000	0.00	0.00	6.16	10.1	42.910

28.167	0.000	0.00	0.00	6.15	9.7	42.843
28.250	0.000	0.00	0.00	6.15	9.4	42.778
28.333	0.000	0.00	0.00	6.14	9.1	42.715
28.417	0.000	0.00	0.00	6.14	8.8	42.655
28.500	0.000	0.00	0.00	6.13	8.5	42.597
28.583	0.000	0.00	0.00	6.13	8.2	42.541
28.667	0.000	0.00	0.00	6.12	7.9	42.486
28.750	0.000	0.00	0.00	6.12	7.6	42.434
28.833	0.000	0.00	0.00	6.12	7.3	42.383
28.917	0.000	0.00	0.00	6.11	7.1	42.335
29.000	0.000	0.00	0.00	6.11	6.8	42.288
29.083	0.000	0.00	0.00	6.10	6.6	42.242
29.167	0.000	0.00	0.00	6.10	6.4	42.198
29.250	0.000	0.00	0.00	6.10	6.1	42.156
29.333	0.000	0.00	0.00	6.09	5.9	42.115
29.417	0.000	0.00	0.00	6.09	5.7	42.076
29.500	0.000	0.00	0.00	6.09	5.5	42.038
29.583	0.000	0.00	0.00	6.08	5.3	42.001
29.667	0.000	0.00	0.00	6.08	5.1	41.966
29.750	0.000	0.00	0.00	6.08	5.0	41.932
29.833	0.000	0.00	0.00	6.07	4.8	41.899
29.917	0.000	0.00	0.00	6.07	4.6	41.867

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 225.637 AF
 BASIN STORAGE = 36.766 AF (WITH 0.000 AF INITIALLY FILLED)
 OUTFLOW VOLUME = 188.859 AF
 LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 11

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

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	225.0	450.0	675.0	900.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0000	0.00	Q	.	.	.	.
0.417	0.0000	0.00	Q	.	.	.	.
0.500	0.0000	0.00	Q	.	.	.	.
0.583	0.0001	0.00	Q	.	.	.	.
0.667	0.0001	0.01	Q	.	.	.	.
0.750	0.0002	0.01	Q	.	.	.	.
0.833	0.0002	0.01	Q	.	.	.	.
0.917	0.0003	0.01	Q	.	.	.	.
1.000	0.0004	0.01	Q	.	.	.	.
1.083	0.0004	0.01	Q	.	.	.	.
1.167	0.0005	0.01	Q	.	.	.	.
1.250	0.0006	0.01	Q	.	.	.	.
1.333	0.0007	0.01	Q	.	.	.	.
1.417	0.0008	0.02	Q	.	.	.	.

1.500	0.0009	0.02	Q	.	.	.	.
1.583	0.0011	0.02	Q	.	.	.	.
1.667	0.0012	0.02	Q	.	.	.	.
1.750	0.0013	0.02	Q	.	.	.	.
1.833	0.0014	0.02	Q	.	.	.	.
1.917	0.0016	0.02	Q	.	.	.	.
2.000	0.0017	0.02	Q	.	.	.	.
2.083	0.0019	0.02	Q	.	.	.	.
2.167	0.0020	0.02	Q	.	.	.	.
2.250	0.0022	0.02	Q	.	.	.	.
2.333	0.0023	0.02	Q	.	.	.	.
2.417	0.0025	0.02	Q	.	.	.	.
2.500	0.0027	0.02	Q	.	.	.	.
2.583	0.0028	0.02	Q	.	.	.	.
2.667	0.0030	0.03	Q	.	.	.	.
2.750	0.0032	0.03	Q	.	.	.	.
2.833	0.0034	0.03	Q	.	.	.	.
2.917	0.0035	0.03	Q	.	.	.	.
3.000	0.0037	0.03	Q	.	.	.	.
3.083	0.0039	0.03	Q	.	.	.	.
3.167	0.0041	0.03	Q	.	.	.	.
3.250	0.0043	0.03	Q	.	.	.	.
3.333	0.0045	0.03	Q	.	.	.	.
3.417	0.0047	0.03	Q	.	.	.	.
3.500	0.0049	0.03	Q	.	.	.	.
3.583	0.0051	0.03	Q	.	.	.	.
3.667	0.0053	0.03	Q	.	.	.	.
3.750	0.0055	0.03	Q	.	.	.	.
3.833	0.0058	0.03	Q	.	.	.	.
3.917	0.0060	0.03	Q	.	.	.	.
4.000	0.0062	0.03	Q	.	.	.	.
4.083	0.0064	0.03	Q	.	.	.	.
4.167	0.0067	0.03	Q	.	.	.	.
4.250	0.0069	0.03	Q	.	.	.	.
4.333	0.0071	0.03	Q	.	.	.	.
4.417	0.0074	0.04	Q	.	.	.	.
4.500	0.0076	0.04	Q	.	.	.	.
4.583	0.0079	0.04	Q	.	.	.	.
4.667	0.0081	0.04	Q	.	.	.	.
4.750	0.0084	0.04	Q	.	.	.	.
4.833	0.0086	0.04	Q	.	.	.	.
4.917	0.0089	0.04	Q	.	.	.	.
5.000	0.0092	0.04	Q	.	.	.	.
5.083	0.0094	0.04	Q	.	.	.	.
5.167	0.0097	0.04	Q	.	.	.	.
5.250	0.0100	0.04	Q	.	.	.	.
5.333	0.0103	0.04	Q	.	.	.	.
5.417	0.0105	0.04	Q	.	.	.	.
5.500	0.0108	0.04	Q	.	.	.	.
5.583	0.0111	0.04	Q	.	.	.	.
5.667	0.0114	0.04	Q	.	.	.	.
5.750	0.0117	0.04	Q	.	.	.	.
5.833	0.0120	0.04	Q	.	.	.	.
5.917	0.0123	0.04	Q	.	.	.	.
6.000	0.0126	0.04	Q	.	.	.	.
6.083	0.0129	0.04	Q	.	.	.	.
6.167	0.0132	0.04	Q	.	.	.	.
6.250	0.0135	0.05	Q	.	.	.	.

6.333	0.0138	0.05	Q	.	.	.	.
6.417	0.0141	0.05	Q	.	.	.	.
6.500	0.0145	0.05	Q	.	.	.	.
6.583	0.0148	0.05	Q	.	.	.	.
6.667	0.0151	0.05	Q	.	.	.	.
6.750	0.0154	0.05	Q	.	.	.	.
6.833	0.0158	0.05	Q	.	.	.	.
6.917	0.0161	0.05	Q	.	.	.	.
7.000	0.0165	0.05	Q	.	.	.	.
7.083	0.0168	0.05	Q	.	.	.	.
7.167	0.0171	0.05	Q	.	.	.	.
7.250	0.0175	0.05	Q	.	.	.	.
7.333	0.0179	0.05	Q	.	.	.	.
7.417	0.0182	0.05	Q	.	.	.	.
7.500	0.0186	0.05	Q	.	.	.	.
7.583	0.0189	0.05	Q	.	.	.	.
7.667	0.0193	0.05	Q	.	.	.	.
7.750	0.0197	0.05	Q	.	.	.	.
7.833	0.0200	0.05	Q	.	.	.	.
7.917	0.0204	0.05	Q	.	.	.	.
8.000	0.0208	0.06	Q	.	.	.	.
8.083	0.0212	0.06	Q	.	.	.	.
8.167	0.0216	0.06	Q	.	.	.	.
8.250	0.0220	0.06	Q	.	.	.	.
8.333	0.0223	0.06	Q	.	.	.	.
8.417	0.0227	0.06	Q	.	.	.	.
8.500	0.0231	0.06	Q	.	.	.	.
8.583	0.0235	0.06	Q	.	.	.	.
8.667	0.0239	0.06	Q	.	.	.	.
8.750	0.0243	0.06	Q	.	.	.	.
8.833	0.0248	0.06	Q	.	.	.	.
8.917	0.0252	0.06	Q	.	.	.	.
9.000	0.0256	0.06	Q	.	.	.	.
9.083	0.0260	0.06	Q	.	.	.	.
9.167	0.0264	0.06	Q	.	.	.	.
9.250	0.0268	0.06	Q	.	.	.	.
9.333	0.0273	0.06	Q	.	.	.	.
9.417	0.0277	0.06	Q	.	.	.	.
9.500	0.0281	0.06	Q	.	.	.	.
9.583	0.0286	0.06	Q	.	.	.	.
9.667	0.0290	0.06	Q	.	.	.	.
9.750	0.0295	0.06	Q	.	.	.	.
9.833	0.0299	0.06	Q	.	.	.	.
9.917	0.0304	0.07	Q	.	.	.	.
10.000	0.0322	0.26	Q	.	.	.	.
10.083	0.0438	1.69	Q	.	.	.	.
10.167	0.0722	4.13	Q	.	.	.	.
10.250	0.1170	6.50	Q	.	.	.	.
10.333	0.1777	8.81	Q	.	.	.	.
10.417	0.2539	11.06	Q	.	.	.	.
10.500	0.3452	13.26	Q	.	.	.	.
10.583	0.4513	15.40	Q	.	.	.	.
10.667	0.5717	17.49	Q	.	.	.	.
10.750	0.7063	19.53	Q	.	.	.	.
10.833	0.8545	21.53	Q	.	.	.	.
10.917	1.0162	23.48	VQ	.	.	.	.
11.000	1.1911	25.39	VQ	.	.	.	.
11.083	1.3788	27.26	VQ	.	.	.	.

11.167	1.5792	29.09	VQ	.	.	.	.
11.250	1.7919	30.88	VQ	.	.	.	.
11.333	2.0167	32.64	VQ	.	.	.	.
11.417	2.2534	34.37	VQ	.	.	.	.
11.500	2.5019	36.07	VQ	.	.	.	.
11.583	2.7618	37.74	VQ	.	.	.	.
11.667	3.0331	39.39	VQ	.	.	.	.
11.750	3.3155	41.01	VQ	.	.	.	.
11.833	3.6089	42.61	VQ	.	.	.	.
11.917	3.9132	44.18	VQ	.	.	.	.
12.000	4.2283	45.74	V Q	.	.	.	.
12.083	4.5539	47.29	V Q	.	.	.	.
12.167	4.8905	48.86	.VQ	.	.	.	.
12.250	5.2384	50.53	.VQ	.	.	.	.
12.333	5.5989	52.34	.VQ	.	.	.	.
12.417	5.9730	54.32	.VQ	.	.	.	.
12.500	6.3617	56.44	.VQ	.	.	.	.
12.583	6.7654	58.62	.VQ	.	.	.	.
12.667	7.1845	60.84	.VQ	.	.	.	.
12.750	7.6346	65.36	.VQ	.	.	.	.
12.833	8.1300	71.94	.V Q	.	.	.	.
12.917	8.6676	78.05	.V Q	.	.	.	.
13.000	9.2440	83.70	.V Q	.	.	.	.
13.083	9.8564	88.92	. VQ	.	.	.	.
13.167	10.5023	93.78	. V Q	.	.	.	.
13.250	11.1793	98.31	. V Q	.	.	.	.
13.333	11.8856	102.55	. V Q	.	.	.	.
13.417	12.6194	106.56	. V Q	.	.	.	.
13.500	13.3794	110.35	. V Q	.	.	.	.
13.583	14.1643	113.97	. V Q	.	.	.	.
13.667	14.9732	117.44	. V Q	.	.	.	.
13.750	15.8051	120.80	. V Q	.	.	.	.
13.833	16.6595	124.06	. V Q	.	.	.	.
13.917	17.5360	127.25	. V Q	.	.	.	.
14.000	18.4340	130.40	. V Q	.	.	.	.
14.083	19.3538	133.54	. VQ	.	.	.	.
14.167	20.2956	136.76	. V Q	.	.	.	.
14.250	21.2611	140.19	. V Q	.	.	.	.
14.333	22.2527	143.97	. V Q	.	.	.	.
14.417	23.2728	148.12	. V Q	.	.	.	.
14.500	24.3236	152.57	. VQ	.	.	.	.
14.583	25.4062	157.19	. VQ	.	.	.	.
14.667	26.5213	161.92	. V Q	.	.	.	.
14.750	27.6695	166.71	. V Q	.	.	.	.
14.833	28.8512	171.58	. VQ	.	.	.	.
14.917	30.0671	176.55	. VQ	.	.	.	.
15.000	31.3182	181.65	. V Q	.	.	.	.
15.083	32.6056	186.94	. V Q	.	.	.	.
15.167	33.9310	192.45	. VQ	.	.	.	.
15.250	35.2964	198.25	. VQ	.	.	.	.
15.333	36.7043	204.43	. V Q.	.	.	.	.
15.417	38.1577	211.03	. VQ.	.	.	.	.
15.500	39.6582	217.87	. VQ.	.	.	.	.
15.583	41.2048	224.57	. VQ.	.	.	.	.
15.667	42.7947	230.86	. VQ	.	.	.	.
15.750	44.4275	237.08	. VQ	.	.	.	.
15.833	46.1124	244.65	. VQ	.	.	.	.
15.917	47.8752	255.95	. VQ	.	.	.	.

16.000	49.7746	275.80	.	V Q	.	.	.
16.083	51.9694	318.68	.	.V Q	.	.	.
16.167	54.7146	398.60	.	.V Q	.	.	.
16.250	58.2746	516.91	.	. V	. Q	.	.
16.333	62.7480	649.55	.	. V	.	Q	.
16.417	67.9773	759.29	.	. V	.	.	Q
16.500	73.6247	820.00	.	. V	.	.	Q Q
16.583	79.3178	826.64	.	. V	.	.	Q Q
16.667	84.8023	796.35	.	. V	.	.	Q Q
16.750	89.9481	747.17	.	. V.	.	.	Q
16.833	94.7062	690.88	.	. V	.	Q	.
16.917	99.0702	633.64	.	. V	.	Q	.
17.000	103.0442	577.03	.	. V	Q	.	.
17.083	106.6491	523.44	.	.	. VQ	.	.
17.167	109.9210	475.08	.	.	. Q V	.	.
17.250	112.8939	431.66	.	.	Q.	V	.
17.333	115.5994	392.84	.	.	Q	V	.
17.417	118.0667	358.25	.	.	Q	V	.
17.500	120.3223	327.52	.	.	Q	V	.
17.583	122.3908	300.34	.	.	Q	V	.
17.667	124.3114	278.88	.	.	Q	V	.
17.750	126.1263	263.52	.	.Q	.	V	.
17.833	127.8534	250.77	.	.Q	.	V	.
17.917	129.4988	238.91	.	.Q	.	V	.
18.000	131.0681	227.87	.	.Q	.	V	.
18.083	132.5667	217.59	.	.Q	.	V	.
18.167	133.9987	207.92	.	.Q	.	V	.
18.250	135.3666	198.62	.	.Q	.	V	.
18.333	136.6716	189.49	.	.Q	.	V	.
18.417	137.9145	180.47	.	.Q	.	V	.
18.500	139.0968	171.66	.	.Q	.	V	.
18.583	140.2211	163.25	.	.Q	.	V	.
18.667	141.2909	155.34	.	.Q	.	V	.
18.750	142.3099	147.97	.	.Q	.	V	.
18.833	143.2820	141.15	.	.Q	.	V	.
18.917	144.2108	134.85	.	.Q	.	V	.
19.000	145.0994	129.03	.	.Q	.	V	.
19.083	145.9511	123.66	.	.Q	.	V	.
19.167	146.7686	118.70	.	.Q	.	.V	.
19.250	147.5545	114.12	.	.Q	.	.V	.
19.333	148.3113	109.88	.	.Q	.	.V	.
19.417	149.0410	105.96	.	.Q	.	.V	.
19.500	149.7457	102.32	.	.Q	.	.V	.
19.583	150.4272	98.95	.	.Q	.	.V	.
19.667	151.0871	95.82	.	.Q	.	.V	.
19.750	151.7269	92.90	.	.Q	.	.V	.
19.833	152.3481	90.19	.	.Q	.	.V	.
19.917	152.9518	87.66	.	.Q	.	.V	.
20.000	153.5393	85.30	.	.Q	.	.V	.
20.083	154.1115	83.09	.	.Q	.	.V	.
20.167	154.6695	81.02	.	.Q	.	.V	.
20.250	155.2142	79.08	.	.Q	.	.V	.
20.333	155.7463	77.26	.	.Q	.	.V	.
20.417	156.2666	75.55	.	.Q	.	.V	.
20.500	156.7758	73.94	.	.Q	.	.V	.
20.583	157.2745	72.41	.	.Q	.	.V	.
20.667	157.7633	70.98	.	.Q	.	.V	.
20.750	158.2428	69.62	.	.Q	.	.V	.

20.833	158.7134	68.33	. Q	.	.	.	V	.
20.917	159.1756	67.11	. Q	.	.	.	V	.
21.000	159.6297	65.95	. Q	.	.	.	V	.
21.083	160.0763	64.85	. Q	.	.	.	V	.
21.167	160.5157	63.79	. Q	.	.	.	V	.
21.250	160.9482	62.79	. Q	.	.	.	V	.
21.333	161.3755	62.05	. Q	.	.	.	V	.
21.417	161.8000	61.65	. Q	.	.	.	V	.
21.500	162.2225	61.34	. Q	.	.	.	V	.
21.583	162.6428	61.02	. Q	.	.	.	V	.
21.667	163.0609	60.70	. Q	.	.	.	V	.
21.750	163.4767	60.37	. Q	.	.	.	V	.
21.833	163.8902	60.04	. Q	.	.	.	V	.
21.917	164.3013	59.70	. Q	.	.	.	V	.
22.000	164.7101	59.36	. Q	.	.	.	V	.
22.083	165.1165	59.01	. Q	.	.	.	V	.
22.167	165.5204	58.65	. Q	.	.	.	V	.
22.250	165.9219	58.30	. Q	.	.	.	V	.
22.333	166.3210	57.94	. Q	.	.	.	V	.
22.417	166.7175	57.58	. Q	.	.	.	V	.
22.500	167.1116	57.22	. Q	.	.	.	V	.
22.583	167.5031	56.85	. Q	.	.	.	V	.
22.667	167.8922	56.49	. Q	.	.	.	V	.
22.750	168.2787	56.12	. Q	.	.	.	V	.
22.833	168.6628	55.76	. Q	.	.	.	V	.
22.917	169.0443	55.39	. Q	.	.	.	V	.
23.000	169.4232	55.03	. Q	.	.	.	V	.
23.083	169.7997	54.66	. Q	.	.	.	V	.
23.167	170.1736	54.30	. Q	.	.	.	V	.
23.250	170.5451	53.93	. Q	.	.	.	V	.
23.333	170.9140	53.57	. Q	.	.	.	V	.
23.417	171.2805	53.21	. Q	.	.	.	V	.
23.500	171.6445	52.85	. Q	.	.	.	V	.
23.583	172.0060	52.49	. Q	.	.	.	V	.
23.667	172.3650	52.13	. Q	.	.	.	V	.
23.750	172.7216	51.78	. Q	.	.	.	V	.
23.833	173.0758	51.43	. Q	.	.	.	V	.
23.917	173.4276	51.08	. Q	.	.	.	V	.
24.000	173.7769	50.73	. Q	.	.	.	V	.
24.083	174.1238	50.37	. Q	.	.	.	V	.
24.167	174.4678	49.95	. Q	.	.	.	V	.
24.250	174.8079	49.37	. Q	.	.	.	V	.
24.333	175.1422	48.55	. Q	.	.	.	V	.
24.417	175.4690	47.45	. Q	.	.	.	V	.
24.500	175.7868	46.14	. Q	.	.	.	V	.
24.583	176.0948	44.72	.Q	.	.	.	V	.
24.667	176.3927	43.26	.Q	.	.	.	V	.
24.750	176.6806	41.80	.Q	.	.	.	V	.
24.833	176.9586	40.37	.Q	.	.	.	V	.
24.917	177.2271	38.98	.Q	.	.	.	V	.
25.000	177.4863	37.63	.Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
---	-----------------------

Percentile	Duration (minutes)
0%	1505.0
10%	430.0
20%	230.0
30%	120.0
40%	80.0
50%	65.0
60%	55.0
70%	40.0
80%	30.0
90%	25.0

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 1237

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED C *
* UNIT HYDROGRAPH - COMPLEX MODEL - SINGLE BASIN *
* 25-YR EV APRIL 2023 ROKAMOTO *

FILE NAME: 3C25EVC.DAT
TIME/DATE OF STUDY: 12:27 04/29/2023

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 712.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.300 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.100
LOW LOSS FRACTION = 0.268
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.34
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.72
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.95
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.59
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.20
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.68

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 27.778

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.701	146.564
2	9.283	653.418
3	25.290	1379.488
4	46.738	1848.432
5	68.920	1911.606
6	83.414	1249.081
7	91.365	685.213
8	95.710	374.525
9	97.845	183.995
10	98.542	60.004
11	99.062	44.880
12	99.583	44.880
13	100.000	35.919

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 49.7581
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 168.1183

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	275.0	550.0	825.0	1100.0
0.083	0.0035	0.51	Q	.	.	.	.
0.167	0.0227	2.78	Q	.	.	.	.
0.250	0.0749	7.59	Q	.	.	.	.
0.333	0.1716	14.04	Q	.	.	.	.
0.417	0.3144	20.73	Q	.	.	.	.
0.500	0.4875	25.14	Q	.	.	.	.
0.583	0.6776	27.60	VQ	.	.	.	.
0.667	0.8772	28.99	VQ	.	.	.	.
0.750	1.0820	29.73	VQ	.	.	.	.
0.833	1.2889	30.04	VQ	.	.	.	.
0.917	1.4975	30.30	VQ	.	.	.	.
1.000	1.7080	30.56	VQ	.	.	.	.
1.083	1.9200	30.78	VQ	.	.	.	.
1.167	2.1327	30.89	VQ	.	.	.	.
1.250	2.3462	31.00	VQ	.	.	.	.
1.333	2.5604	31.10	VQ	.	.	.	.
1.417	2.7754	31.21	VQ	.	.	.	.
1.500	2.9911	31.32	VQ	.	.	.	.
1.583	3.2076	31.43	VQ	.	.	.	.
1.667	3.4248	31.54	VQ	.	.	.	.
1.750	3.6429	31.66	VQ	.	.	.	.
1.833	3.8617	31.77	VQ	.	.	.	.
1.917	4.0813	31.89	VQ	.	.	.	.
2.000	4.3017	32.00	.Q	.	.	.	.
2.083	4.5229	32.12	.Q	.	.	.	.
2.167	4.7449	32.24	.Q	.	.	.	.
2.250	4.9677	32.36	.Q	.	.	.	.
2.333	5.1914	32.48	.Q	.	.	.	.
2.417	5.4159	32.60	.Q	.	.	.	.
2.500	5.6412	32.72	.Q	.	.	.	.
2.583	5.8674	32.84	.Q	.	.	.	.
2.667	6.0945	32.97	.Q	.	.	.	.
2.750	6.3224	33.10	.Q	.	.	.	.
2.833	6.5512	33.22	.Q	.	.	.	.
2.917	6.7809	33.35	.Q	.	.	.	.
3.000	7.0115	33.48	.Q	.	.	.	.
3.083	7.2430	33.61	.Q	.	.	.	.
3.167	7.4754	33.75	.Q	.	.	.	.
3.250	7.7088	33.88	.Q	.	.	.	.
3.333	7.9431	34.02	.Q	.	.	.	.
3.417	8.1783	34.15	.Q	.	.	.	.
3.500	8.4144	34.29	.QV	.	.	.	.
3.583	8.6516	34.43	.QV	.	.	.	.
3.667	8.8897	34.57	.QV	.	.	.	.
3.750	9.1288	34.72	.QV	.	.	.	.
3.833	9.3689	34.86	.QV	.	.	.	.
3.917	9.6100	35.01	.QV	.	.	.	.

4.000	9.8521	35.15	.QV	.	.	.	.
4.083	10.0952	35.30	.QV	.	.	.	.
4.167	10.3394	35.45	.QV	.	.	.	.
4.250	10.5846	35.61	.QV	.	.	.	.
4.333	10.8309	35.76	.QV	.	.	.	.
4.417	11.0783	35.92	.QV	.	.	.	.
4.500	11.3267	36.08	.QV	.	.	.	.
4.583	11.5763	36.24	.QV	.	.	.	.
4.667	11.8270	36.40	.QV	.	.	.	.
4.750	12.0788	36.56	.QV	.	.	.	.
4.833	12.3317	36.73	.QV	.	.	.	.
4.917	12.5858	36.89	.QV	.	.	.	.
5.000	12.8410	37.06	.Q V	.	.	.	.
5.083	13.0974	37.23	.Q V	.	.	.	.
5.167	13.3551	37.41	.Q V	.	.	.	.
5.250	13.6139	37.58	.Q V	.	.	.	.
5.333	13.8739	37.76	.Q V	.	.	.	.
5.417	14.1352	37.94	.Q V	.	.	.	.
5.500	14.3978	38.12	.Q V	.	.	.	.
5.583	14.6616	38.31	.Q V	.	.	.	.
5.667	14.9267	38.49	.Q V	.	.	.	.
5.750	15.1931	38.68	.Q V	.	.	.	.
5.833	15.4608	38.87	.Q V	.	.	.	.
5.917	15.7299	39.07	.Q V	.	.	.	.
6.000	16.0003	39.26	.Q V	.	.	.	.
6.083	16.2721	39.46	.Q V	.	.	.	.
6.167	16.5452	39.66	.Q V	.	.	.	.
6.250	16.8198	39.87	.Q V	.	.	.	.
6.333	17.0958	40.08	.Q V	.	.	.	.
6.417	17.3733	40.29	.Q V	.	.	.	.
6.500	17.6522	40.50	.Q V	.	.	.	.
6.583	17.9326	40.72	.Q V	.	.	.	.
6.667	18.2145	40.93	.Q V	.	.	.	.
6.750	18.4979	41.16	.Q V	.	.	.	.
6.833	18.7829	41.38	.Q V	.	.	.	.
6.917	19.0695	41.61	.Q V	.	.	.	.
7.000	19.3576	41.84	.Q V	.	.	.	.
7.083	19.6474	42.08	.Q V	.	.	.	.
7.167	19.9388	42.31	.Q V	.	.	.	.
7.250	20.2319	42.56	.Q V	.	.	.	.
7.333	20.5267	42.80	.Q V	.	.	.	.
7.417	20.8232	43.05	.Q V	.	.	.	.
7.500	21.1214	43.30	.Q V	.	.	.	.
7.583	21.4214	43.56	.Q V	.	.	.	.
7.667	21.7232	43.82	.Q V	.	.	.	.
7.750	22.0268	44.09	.Q V	.	.	.	.
7.833	22.3323	44.35	.Q V	.	.	.	.
7.917	22.6396	44.63	.Q V	.	.	.	.
8.000	22.9489	44.91	.Q V	.	.	.	.
8.083	23.2601	45.19	.Q V	.	.	.	.
8.167	23.5733	45.47	.Q V	.	.	.	.
8.250	23.8885	45.77	.Q V	.	.	.	.
8.333	24.2058	46.06	.Q V	.	.	.	.
8.417	24.5251	46.37	.Q V	.	.	.	.
8.500	24.8465	46.67	.Q V	.	.	.	.
8.583	25.1701	46.99	.Q V	.	.	.	.
8.667	25.4959	47.30	.Q V	.	.	.	.
8.750	25.8239	47.63	.Q V	.	.	.	.

8.833	26.1542	47.96	.Q	V	.	.	.	.
8.917	26.4868	48.29	.Q	V	.	.	.	.
9.000	26.8217	48.63	.Q	V	.	.	.	.
9.083	27.1591	48.98	.Q	V	.	.	.	.
9.167	27.4988	49.33	.Q	V	.	.	.	.
9.250	27.8411	49.70	.Q	V	.	.	.	.
9.333	28.1859	50.06	.Q	V	.	.	.	.
9.417	28.5333	50.44	.Q	V	.	.	.	.
9.500	28.8833	50.82	.Q	V	.	.	.	.
9.583	29.2360	51.21	.Q	V	.	.	.	.
9.667	29.5914	51.61	.Q	V	.	.	.	.
9.750	29.9497	52.02	.Q	V	.	.	.	.
9.833	30.3108	52.43	.Q	V	.	.	.	.
9.917	30.6748	52.86	.Q	V	.	.	.	.
10.000	31.0418	53.28	.Q	V	.	.	.	.
10.083	31.4118	53.73	.Q	V	.	.	.	.
10.167	31.7849	54.18	.Q	V	.	.	.	.
10.250	32.1612	54.64	.Q	V	.	.	.	.
10.333	32.5408	55.11	.Q	V	.	.	.	.
10.417	32.9236	55.59	.Q	V	.	.	.	.
10.500	33.3099	56.08	.Q	V	.	.	.	.
10.583	33.6997	56.59	.Q	V	.	.	.	.
10.667	34.0929	57.11	.Q	V	.	.	.	.
10.750	34.4899	57.64	.Q	V	.	.	.	.
10.833	34.8906	58.18	.Q	V	.	.	.	.
10.917	35.2951	58.74	.Q	V	.	.	.	.
11.000	35.7035	59.30	.Q	V	.	.	.	.
11.083	36.1160	59.89	.Q	V	.	.	.	.
11.167	36.5325	60.48	.Q	V	.	.	.	.
11.250	36.9533	61.10	.Q	V	.	.	.	.
11.333	37.3785	61.73	.Q	V	.	.	.	.
11.417	37.8081	62.38	.Q	V	.	.	.	.
11.500	38.2423	63.05	.Q	V	.	.	.	.
11.583	38.6812	63.73	.Q	V	.	.	.	.
11.667	39.1250	64.44	.Q	V	.	.	.	.
11.750	39.5738	65.17	.Q	V	.	.	.	.
11.833	40.0277	65.91	.Q	V	.	.	.	.
11.917	40.4870	66.68	.Q	V	.	.	.	.
12.000	40.9516	67.47	.Q	V	.	.	.	.
12.083	41.4243	68.63	.Q	V	.	.	.	.
12.167	41.9130	70.96	.Q	V	.	.	.	.
12.250	42.4295	74.99	.Q	V	.	.	.	.
12.333	42.9813	80.12	.Q	V	.	.	.	.
12.417	43.5699	85.45	.Q	V	.	.	.	.
12.500	44.1849	89.31	.Q	V	.	.	.	.
12.583	44.8180	91.93	.Q	V	.	.	.	.
12.667	45.4645	93.87	.Q	V	.	.	.	.
12.750	46.1217	95.43	.Q	V	.	.	.	.
12.833	46.7879	96.73	.Q	.V	.	.	.	.
12.917	47.4633	98.06	.Q	.V	.	.	.	.
13.000	48.1480	99.42	.Q	.V	.	.	.	.
13.083	48.8424	100.83	.Q	.V	.	.	.	.
13.167	49.5462	102.19	.Q	.V	.	.	.	.
13.250	50.2598	103.62	.Q	.V	.	.	.	.
13.333	50.9836	105.09	.Q	.V	.	.	.	.
13.417	51.7180	106.64	.Q	.V	.	.	.	.
13.500	52.4635	108.25	.Q	.V	.	.	.	.
13.583	53.2207	109.94	.Q	.V	.	.	.	.

13.667	53.9900	111.70	.Q	.V	.	.	.	.
13.750	54.7720	113.56	.Q	.V	.	.	.	.
13.833	55.5674	115.49	.Q	.V	.	.	.	.
13.917	56.3769	117.54	.Q	.V	.	.	.	.
14.000	57.2012	119.68	.Q	.V	.	.	.	.
14.083	58.0424	122.15	.Q	.V	.	.	.	.
14.167	58.9059	125.38	.Q	.V	.	.	.	.
14.250	59.7993	129.72	.Q	.V	.	.	.	.
14.333	60.7276	134.79	.Q	.V	.	.	.	.
14.417	61.6927	140.14	.Q	.V	.	.	.	.
14.500	62.6900	144.80	.Q	.V	.	.	.	.
14.583	63.7161	148.99	.Q	.V	.	.	.	.
14.667	64.7696	152.97	.Q	.V	.	.	.	.
14.750	65.8509	157.01	.Q	.V	.	.	.	.
14.833	66.9609	161.16	.Q	.V	.	.	.	.
14.917	68.1020	165.69	.Q	.V	.	.	.	.
15.000	69.2766	170.56	.Q	.V	.	.	.	.
15.083	70.4887	175.99	.Q	.V	.	.	.	.
15.167	71.7422	182.01	.Q	.V	.	.	.	.
15.250	73.0448	189.14	.Q	.V	.	.	.	.
15.333	74.4058	197.61	.Q	.V	.	.	.	.
15.417	75.8295	206.73	.Q	.V	.	.	.	.
15.500	77.2996	213.46	.Q	.V	.	.	.	.
15.583	78.7904	216.47	.Q	.V	.	.	.	.
15.667	80.2927	218.13	.Q	.V	.	.	.	.
15.750	81.8330	223.65	.Q	.V	.	.	.	.
15.833	83.4959	241.45	.Q	.V	.	.	.	.
15.917	85.3966	275.99	.Q	.V	.	.	.	.
16.000	87.6924	333.35	.Q	.V	.	.	.	.
16.083	90.8104	452.73	.Q	.V	.	.	.	.
16.167	95.3902	664.99	.Q	.V	.Q	.	.	.
16.250	101.6019	901.93	.Q	.V	.Q	.	.	.
16.333	108.6217	1019.27	.Q	.V	.Q	.	.	.
16.417	115.3298	974.03	.Q	.V	.Q	.	.	.
16.500	120.3623	730.72	.Q	.V	.Q	.	.	.
16.583	123.9239	517.14	.Q	.V	.Q	.	.	.
16.667	126.5691	384.08	.Q	.V	.Q	.	.	.
16.750	128.6308	299.36	.Q	.V	.Q	.	.	.
16.833	130.2982	242.10	.Q	.V	.Q	.	.	.
16.917	131.7980	217.78	.Q	.V	.Q	.	.	.
17.000	133.1854	201.45	.Q	.V	.Q	.	.	.
17.083	134.4582	184.82	.Q	.V	.Q	.	.	.
17.167	135.5859	163.74	.Q	.V	.Q	.	.	.
17.250	136.6373	152.67	.Q	.V	.Q	.	.	.
17.333	137.6224	143.02	.Q	.V	.Q	.	.	.
17.417	138.5481	134.41	.Q	.V	.Q	.	.	.
17.500	139.4243	127.22	.Q	.V	.Q	.	.	.
17.583	140.2607	121.45	.Q	.V	.Q	.	.	.
17.667	141.0639	116.63	.Q	.V	.Q	.	.	.
17.750	141.8386	112.49	.Q	.V	.Q	.	.	.
17.833	142.5885	108.87	.Q	.V	.Q	.	.	.
17.917	143.3157	105.59	.Q	.V	.Q	.	.	.
18.000	144.0221	102.57	.Q	.V	.Q	.	.	.
18.083	144.7071	99.47	.Q	.V	.Q	.	.	.
18.167	145.3646	95.46	.Q	.V	.Q	.	.	.
18.250	145.9843	89.98	.Q	.V	.Q	.	.	.
18.333	146.5601	83.61	.Q	.V	.Q	.	.	.
18.417	147.0923	77.27	.Q	.V	.Q	.	.	.

18.500	147.5923	72.59	.Q	.	.	.	V	.
18.583	148.0698	69.33	.Q	.	.	.	V	.
18.667	148.5305	66.89	.Q	.	.	.	V	.
18.750	148.9780	64.98	.Q	.	.	.	V	.
18.833	149.4149	63.44	.Q	.	.	.	V	.
18.917	149.8420	62.01	.Q	.	.	.	V	.
19.000	150.2597	60.65	.Q	.	.	.	V	.
19.083	150.6687	59.38	.Q	.	.	.	V	.
19.167	151.0698	58.25	.Q	.	.	.	V	.
19.250	151.4636	57.17	.Q	.	.	.	V	.
19.333	151.8503	56.15	.Q	.	.	.	V	.
19.417	152.2302	55.17	.Q	.	.	.	V	.
19.500	152.6037	54.23	.Q	.	.	.	V	.
19.583	152.9710	53.33	.Q	.	.	.	V	.
19.667	153.3324	52.47	.Q	.	.	.	V	.
19.750	153.6881	51.65	.Q	.	.	.	V	.
19.833	154.0383	50.86	.Q	.	.	.	V	.
19.917	154.3834	50.10	.Q	.	.	.	V	.
20.000	154.7234	49.37	.Q	.	.	.	V	.
20.083	155.0585	48.66	.Q	.	.	.	V	.
20.167	155.3890	47.99	.Q	.	.	.	V	.
20.250	155.7150	47.33	.Q	.	.	.	V	.
20.333	156.0366	46.70	.Q	.	.	.	V	.
20.417	156.3540	46.09	.Q	.	.	.	V	.
20.500	156.6674	45.50	.Q	.	.	.	V	.
20.583	156.9768	44.93	.Q	.	.	.	V	.
20.667	157.2824	44.37	.Q	.	.	.	V	.
20.750	157.5843	43.84	.Q	.	.	.	V	.
20.833	157.8827	43.32	.Q	.	.	.	V	.
20.917	158.1776	42.82	.Q	.	.	.	V	.
21.000	158.4691	42.33	.Q	.	.	.	V	.
21.083	158.7573	41.85	.Q	.	.	.	V	.
21.167	159.0424	41.39	.Q	.	.	.	V	.
21.250	159.3244	40.95	.Q	.	.	.	V	.
21.333	159.6034	40.51	.Q	.	.	.	V	.
21.417	159.8795	40.09	.Q	.	.	.	V	.
21.500	160.1528	39.68	.Q	.	.	.	V	.
21.583	160.4232	39.27	.Q	.	.	.	V	.
21.667	160.6910	38.88	.Q	.	.	.	V	.
21.750	160.9562	38.50	.Q	.	.	.	V	.
21.833	161.2188	38.13	.Q	.	.	.	V	.
21.917	161.4789	37.77	.Q	.	.	.	V	.
22.000	161.7366	37.41	.Q	.	.	.	V	.
22.083	161.9919	37.07	.Q	.	.	.	V	.
22.167	162.2449	36.73	.Q	.	.	.	V	.
22.250	162.4956	36.40	.Q	.	.	.	V	.
22.333	162.7441	36.08	.Q	.	.	.	V	.
22.417	162.9904	35.77	.Q	.	.	.	V	.
22.500	163.2346	35.46	.Q	.	.	.	V	.
22.583	163.4768	35.16	.Q	.	.	.	V	.
22.667	163.7169	34.87	.Q	.	.	.	V	.
22.750	163.9550	34.58	.Q	.	.	.	V	.
22.833	164.1913	34.30	.Q	.	.	.	V	.
22.917	164.4256	34.02	.Q	.	.	.	V	.
23.000	164.6580	33.75	.Q	.	.	.	V	.
23.083	164.8886	33.49	.Q	.	.	.	V	.
23.167	165.1174	33.23	.Q	.	.	.	V	.
23.250	165.3445	32.97	.Q	.	.	.	V	.

23.333	165.5699	32.72	.Q	.	.	.	V	.
23.417	165.7936	32.48	.Q	.	.	.	V	.
23.500	166.0156	32.24	.Q	.	.	.	V	.
23.583	166.2361	32.01	.Q	.	.	.	V	.
23.667	166.4549	31.77	.Q	.	.	.	V	.
23.750	166.6722	31.55	.Q	.	.	.	V	.
23.833	166.8879	31.33	.Q	.	.	.	V	.
23.917	167.1022	31.11	.Q	.	.	.	V	.
24.000	167.3149	30.89	.Q	.	.	.	V	.
24.083	167.5227	30.17	.Q	.	.	.	V	.
24.167	167.7135	27.70	.Q	.	.	.	V	.
24.250	167.8701	22.73	Q	.	.	.	V	.
24.333	167.9814	16.17	Q	.	.	.	V	.
24.417	168.0463	9.43	Q	.	.	.	V	.
24.500	168.0810	5.03	Q	.	.	.	V	.
24.583	168.0990	2.62	Q	.	.	.	V	.
24.667	168.1080	1.30	Q	.	.	.	V	.
24.750	168.1125	0.65	Q	.	.	.	V	.
24.833	168.1155	0.44	Q	.	.	.	V	.
24.917	168.1175	0.28	Q	.	.	.	V	.
25.000	168.1183	0.13	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1500.0
10%	295.0
20%	95.0
30%	45.0
40%	35.0
50%	30.0
60%	25.0
70%	20.0
80%	15.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 462.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.257 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) = 0.135
LOW LOSS FRACTION = 0.346

HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.34
 SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 0.72
 SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 0.95
 SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 1.59
 SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 2.20
 SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 3.68

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
 30-MINUTE FACTOR = 0.942
 1-HOUR FACTOR = 0.942
 3-HOUR FACTOR = 0.991
 6-HOUR FACTOR = 0.996
 24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
 UNIT INTERVAL PERCENTAGE OF LAG-TIME = 32.425

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	2.084	116.573
2	12.842	601.702
3	33.622	1162.302
4	60.318	1493.201
5	80.466	1126.976
6	90.864	581.575
7	95.932	283.489
8	98.094	120.950
9	98.762	37.320
10	99.346	32.677
11	99.738	21.957
12	99.935	10.978
13	100.000	3.659

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 42.0074
 TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 99.4064

24 - HOUR STORM
 RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	200.0	400.0	600.0	800.0
0.083	0.0025	0.36	Q	.	.	.	.
0.167	0.0179	2.23	Q	.	.	.	.
0.250	0.0582	5.85	Q	.	.	.	.
0.333	0.1305	10.51	Q	.	.	.	.
0.417	0.2272	14.04	Q	.	.	.	.
0.500	0.3366	15.89	Q	.	.	.	.
0.583	0.4525	16.82	Q	.	.	.	.
0.667	0.5713	17.26	Q	.	.	.	.
0.750	0.6914	17.43	Q	.	.	.	.
0.833	0.8125	17.59	Q	.	.	.	.
0.917	0.9345	17.72	Q	.	.	.	.
1.000	1.0572	17.81	Q	.	.	.	.
1.083	1.1804	17.88	Q	.	.	.	.
1.167	1.3040	17.95	Q	.	.	.	.
1.250	1.4280	18.01	Q	.	.	.	.
1.333	1.5525	18.07	Q	.	.	.	.
1.417	1.6773	18.13	Q	.	.	.	.
1.500	1.8027	18.20	Q	.	.	.	.
1.583	1.9284	18.26	Q	.	.	.	.
1.667	2.0547	18.33	Q	.	.	.	.
1.750	2.1813	18.39	Q	.	.	.	.
1.833	2.3085	18.46	Q	.	.	.	.
1.917	2.4361	18.53	Q	.	.	.	.
2.000	2.5641	18.59	QV	.	.	.	.
2.083	2.6926	18.66	QV	.	.	.	.
2.167	2.8216	18.73	QV	.	.	.	.
2.250	2.9511	18.80	QV	.	.	.	.
2.333	3.0811	18.87	QV	.	.	.	.
2.417	3.2115	18.94	QV	.	.	.	.
2.500	3.3425	19.01	QV	.	.	.	.
2.583	3.4739	19.08	QV	.	.	.	.
2.667	3.6058	19.16	QV	.	.	.	.
2.750	3.7383	19.23	QV	.	.	.	.
2.833	3.8712	19.31	QV	.	.	.	.
2.917	4.0047	19.38	QV	.	.	.	.
3.000	4.1387	19.46	QV	.	.	.	.
3.083	4.2732	19.53	QV	.	.	.	.
3.167	4.4083	19.61	QV	.	.	.	.
3.250	4.5439	19.69	QV	.	.	.	.
3.333	4.6800	19.77	QV	.	.	.	.
3.417	4.8167	19.85	QV	.	.	.	.
3.500	4.9540	19.93	QV	.	.	.	.
3.583	5.0918	20.01	.QV	.	.	.	.
3.667	5.2302	20.09	.QV	.	.	.	.
3.750	5.3691	20.18	.QV	.	.	.	.
3.833	5.5087	20.26	.QV	.	.	.	.
3.917	5.6488	20.35	.QV	.	.	.	.

4.000	5.7895	20.43	.QV	.	.	.	.
4.083	5.9308	20.52	.QV	.	.	.	.
4.167	6.0727	20.61	.QV	.	.	.	.
4.250	6.2153	20.70	.QV	.	.	.	.
4.333	6.3584	20.79	.QV	.	.	.	.
4.417	6.5022	20.88	.QV	.	.	.	.
4.500	6.6466	20.97	.QV	.	.	.	.
4.583	6.7917	21.06	.QV	.	.	.	.
4.667	6.9374	21.16	.QV	.	.	.	.
4.750	7.0837	21.25	.QV	.	.	.	.
4.833	7.2308	21.35	.QV	.	.	.	.
4.917	7.3785	21.45	.QV	.	.	.	.
5.000	7.5269	21.55	.Q V	.	.	.	.
5.083	7.6759	21.64	.Q V	.	.	.	.
5.167	7.8257	21.75	.Q V	.	.	.	.
5.250	7.9762	21.85	.Q V	.	.	.	.
5.333	8.1273	21.95	.Q V	.	.	.	.
5.417	8.2793	22.06	.Q V	.	.	.	.
5.500	8.4319	22.16	.Q V	.	.	.	.
5.583	8.5853	22.27	.Q V	.	.	.	.
5.667	8.7394	22.38	.Q V	.	.	.	.
5.750	8.8943	22.49	.Q V	.	.	.	.
5.833	9.0500	22.60	.Q V	.	.	.	.
5.917	9.2064	22.71	.Q V	.	.	.	.
6.000	9.3636	22.83	.Q V	.	.	.	.
6.083	9.5217	22.95	.Q V	.	.	.	.
6.167	9.6805	23.06	.Q V	.	.	.	.
6.250	9.8402	23.18	.Q V	.	.	.	.
6.333	10.0007	23.30	.Q V	.	.	.	.
6.417	10.1620	23.43	.Q V	.	.	.	.
6.500	10.3242	23.55	.Q V	.	.	.	.
6.583	10.4873	23.68	.Q V	.	.	.	.
6.667	10.6512	23.81	.Q V	.	.	.	.
6.750	10.8161	23.93	.Q V	.	.	.	.
6.833	10.9818	24.07	.Q V	.	.	.	.
6.917	11.1485	24.20	.Q V	.	.	.	.
7.000	11.3161	24.34	.Q V	.	.	.	.
7.083	11.4846	24.47	.Q V	.	.	.	.
7.167	11.6541	24.61	.Q V	.	.	.	.
7.250	11.8246	24.75	.Q V	.	.	.	.
7.333	11.9960	24.90	.Q V	.	.	.	.
7.417	12.1685	25.04	.Q V	.	.	.	.
7.500	12.3420	25.19	.Q V	.	.	.	.
7.583	12.5165	25.34	.Q V	.	.	.	.
7.667	12.6921	25.49	.Q V	.	.	.	.
7.750	12.8687	25.65	.Q V	.	.	.	.
7.833	13.0464	25.81	.Q V	.	.	.	.
7.917	13.2253	25.96	.Q V	.	.	.	.
8.000	13.4052	26.13	.Q V	.	.	.	.
8.083	13.5863	26.29	.Q V	.	.	.	.
8.167	13.7685	26.46	.Q V	.	.	.	.
8.250	13.9519	26.63	.Q V	.	.	.	.
8.333	14.1366	26.81	.Q V	.	.	.	.
8.417	14.3224	26.98	.Q V	.	.	.	.
8.500	14.5094	27.16	.Q V	.	.	.	.
8.583	14.6978	27.34	.Q V	.	.	.	.
8.667	14.8874	27.53	.Q V	.	.	.	.
8.750	15.0783	27.72	.Q V	.	.	.	.

8.833	15.2705	27.91	.Q	V	.	.	.
8.917	15.4641	28.11	.Q	V	.	.	.
9.000	15.6591	28.31	.Q	V	.	.	.
9.083	15.8554	28.51	.Q	V	.	.	.
9.167	16.0532	28.72	.Q	V	.	.	.
9.250	16.2525	28.93	.Q	V	.	.	.
9.333	16.4532	29.15	.Q	V	.	.	.
9.417	16.6555	29.37	.Q	V	.	.	.
9.500	16.8593	29.59	.Q	V	.	.	.
9.583	17.0646	29.82	.Q	V	.	.	.
9.667	17.2716	30.05	.Q	V	.	.	.
9.750	17.4802	30.29	.Q	V	.	.	.
9.833	17.6905	30.53	.Q	V	.	.	.
9.917	17.9025	30.78	.Q	V	.	.	.
10.000	18.1163	31.04	.Q	V	.	.	.
10.083	18.3318	31.29	.Q	V	.	.	.
10.167	18.5491	31.56	.Q	V	.	.	.
10.250	18.7683	31.83	.Q	V	.	.	.
10.333	18.9895	32.11	.Q	V	.	.	.
10.417	19.2125	32.39	.Q	V	.	.	.
10.500	19.4376	32.68	.Q	V	.	.	.
10.583	19.6647	32.97	.Q	V	.	.	.
10.667	19.8939	33.28	.Q	V	.	.	.
10.750	20.1252	33.59	.Q	V	.	.	.
10.833	20.3587	33.91	.Q	V	.	.	.
10.917	20.5945	34.23	.Q	V	.	.	.
11.000	20.8326	34.57	.Q	V	.	.	.
11.083	21.0730	34.91	.Q	V	.	.	.
11.167	21.3159	35.26	.Q	V	.	.	.
11.250	21.5612	35.62	.Q	V	.	.	.
11.333	21.8091	36.00	.Q	V	.	.	.
11.417	22.0596	36.38	.Q	V	.	.	.
11.500	22.3129	36.77	.Q	V	.	.	.
11.583	22.5689	37.17	.Q	V	.	.	.
11.667	22.8278	37.59	.Q	V	.	.	.
11.750	23.0896	38.01	.Q	V	.	.	.
11.833	23.3544	38.46	.Q	V	.	.	.
11.917	23.6224	38.91	.Q	V	.	.	.
12.000	23.8936	39.38	.Q	V	.	.	.
12.083	24.1697	40.10	.Q	V	.	.	.
12.167	24.4578	41.82	.Q	V	.	.	.
12.250	24.7657	44.71	.Q	V	.	.	.
12.333	25.0984	48.30	.Q	V	.	.	.
12.417	25.4508	51.17	.Q	V	.	.	.
12.500	25.8155	52.96	.Q	V	.	.	.
12.583	26.1884	54.15	.Q	V	.	.	.
12.667	26.5676	55.05	.Q	V	.	.	.
12.750	26.9518	55.79	.Q	V	.	.	.
12.833	27.3414	56.56	.Q	.V	.	.	.
12.917	27.7361	57.32	.Q	.V	.	.	.
13.000	28.1363	58.10	.Q	.V	.	.	.
13.083	28.5418	58.88	.Q	.V	.	.	.
13.167	28.9528	59.69	.Q	.V	.	.	.
13.250	29.3697	60.53	.Q	.V	.	.	.
13.333	29.7926	61.41	.Q	.V	.	.	.
13.417	30.2218	62.32	.Q	.V	.	.	.
13.500	30.6577	63.28	.Q	.V	.	.	.
13.583	31.1004	64.28	.Q	.V	.	.	.

13.667	31.5503	65.33	. Q	. V	.	.	.
13.750	32.0078	66.42	. Q	. V	.	.	.
13.833	32.4732	67.59	. Q	. V	.	.	.
13.917	32.9470	68.79	. Q	. V	.	.	.
14.000	33.4297	70.08	. Q	. V	.	.	.
14.083	33.9226	71.56	. Q	. V	.	.	.
14.167	34.4301	73.70	. Q	. V	.	.	.
14.250	34.9573	76.55	. Q	. V	.	.	.
14.333	35.5075	79.89	. Q	. V	.	.	.
14.417	36.0785	82.90	. Q	. V	.	.	.
14.500	36.6668	85.42	. Q	. V	.	.	.
14.583	37.2708	87.71	. Q	. V	.	.	.
14.667	37.8905	89.97	. Q	. V	.	.	.
14.750	38.5260	92.28	. Q	. V	.	.	.
14.833	39.1790	94.81	. Q	. V	.	.	.
14.917	39.8504	97.50	. Q	. V	.	.	.
15.000	40.5423	100.46	. Q	. V	.	.	.
15.083	41.2564	103.67	. Q	. V	.	.	.
15.167	41.9952	107.28	. Q	. V	.	.	.
15.250	42.7625	111.41	. Q	. V	.	.	.
15.333	43.5654	116.58	. Q	. V	.	.	.
15.417	44.4066	122.15	. Q	. V	.	.	.
15.500	45.2719	125.64	. Q	. V	.	.	.
15.583	46.1403	126.10	. Q	. V	.	.	.
15.667	47.0073	125.88	. Q	. V	.	.	.
15.750	47.9120	131.36	. Q	. V	.	.	.
15.833	48.9251	147.10	. Q	. V	.	.	.
15.917	50.1246	174.17	. Q	. V	.	.	.
16.000	51.6371	219.61	. Q	. V	.	.	.
16.083	53.7884	312.37	.	. Q	. V	.	.
16.167	57.1810	492.61	.	.	. VQ	.	.
16.250	61.7213	659.25	.	.	. V	. Q	.
16.333	66.6418	714.46	.	.	. V	. Q	.
16.417	70.5451	566.75	.	.	.	. Q	.
16.500	73.1126	372.81	.	.	. Q	. V	.
16.583	74.8546	252.93	.	. Q	.	. V	.
16.667	76.1272	184.78	.	. Q	.	. V	.
16.750	77.1366	146.57	.	. Q	.	. V	.
16.833	78.0426	131.55	.	. Q	.	. V	.
16.917	78.8578	118.38	.	. Q	.	. V	.
17.000	79.5955	107.11	.	. Q	.	. V	.
17.083	80.2715	98.15	.	. Q	.	. V	.
17.167	80.8990	91.11	.	. Q	.	. V	.
17.250	81.4865	85.30	.	. Q	.	. V	.
17.333	82.0358	79.76	.	. Q	.	. V	.
17.417	82.5533	75.14	.	. Q	.	. V	.
17.500	83.0458	71.52	.	. Q	.	. V	.
17.583	83.5181	68.58	.	. Q	.	. V	.
17.667	83.9733	66.09	.	. Q	.	. V	.
17.750	84.4136	63.93	.	. Q	.	. V	.
17.833	84.8402	61.95	.	. Q	.	. V	.
17.917	85.2546	60.16	.	. Q	.	. V	.
18.000	85.6575	58.51	.	. Q	.	. V	.
18.083	86.0485	56.77	.	. Q	.	. V	.
18.167	86.4214	54.14	.	. Q	.	. V	.
18.250	86.7691	50.49	.	. Q	.	. V	.
18.333	87.0876	46.25	.	. Q	.	. V	.
18.417	87.3828	42.86	.	. Q	.	. V	.

18.500	87.6629	40.66	. Q	.	.	.	. V	.
18.583	87.9325	39.14	. Q	.	.	.	. V	.
18.667	88.1943	38.01	. Q	.	.	.	. V	.
18.750	88.4498	37.10	. Q	.	.	.	. V	.
18.833	88.6994	36.25	. Q	.	.	.	. V	.
18.917	88.9436	35.46	. Q	.	.	.	. V	.
19.000	89.1828	34.73	. Q	.	.	.	. V	.
19.083	89.4174	34.05	. Q	.	.	.	. V	.
19.167	89.6475	33.42	. Q	.	.	.	. V	.
19.250	89.8735	32.81	. Q	.	.	.	. V	.
19.333	90.0955	32.23	. Q	.	.	.	. V	.
19.417	90.3136	31.68	. Q	.	.	.	. V	.
19.500	90.5282	31.15	. Q	.	.	.	. V	.
19.583	90.7392	30.64	. Q	.	.	.	. V	.
19.667	90.9469	30.16	. Q	.	.	.	. V	.
19.750	91.1513	29.69	. Q	.	.	.	. V	.
19.833	91.3527	29.24	. Q	.	.	.	. V	.
19.917	91.5511	28.81	. Q	.	.	.	. V	.
20.000	91.7467	28.40	. Q	.	.	.	. V	.
20.083	91.9395	28.00	. Q	.	.	.	. V	.
20.167	92.1297	27.61	. Q	.	.	.	. V	.
20.250	92.3173	27.24	. Q	.	.	.	. V	.
20.333	92.5024	26.88	. Q	.	.	.	. V	.
20.417	92.6851	26.53	. Q	.	.	.	. V	.
20.500	92.8655	26.20	. Q	.	.	.	. V	.
20.583	93.0437	25.87	. Q	.	.	.	. V	.
20.667	93.2197	25.56	. Q	.	.	.	. V	.
20.750	93.3936	25.25	. Q	.	.	.	. V	.
20.833	93.5655	24.96	. Q	.	.	.	. V	.
20.917	93.7354	24.67	. Q	.	.	.	. V	.
21.000	93.9034	24.39	. Q	.	.	.	. V	.
21.083	94.0695	24.12	. Q	.	.	.	. V	.
21.167	94.2338	23.86	. Q	.	.	.	. V	.
21.250	94.3963	23.60	. Q	.	.	.	. V	.
21.333	94.5572	23.35	. Q	.	.	.	. V	.
21.417	94.7163	23.11	. Q	.	.	.	. V	.
21.500	94.8739	22.88	. Q	.	.	.	. V	.
21.583	95.0298	22.65	. Q	.	.	.	. V	.
21.667	95.1843	22.42	. Q	.	.	.	. V	.
21.750	95.3372	22.21	. Q	.	.	.	. V	.
21.833	95.4887	21.99	. Q	.	.	.	. V	.
21.917	95.6387	21.79	. Q	.	.	.	. V	.
22.000	95.7874	21.58	. Q	.	.	.	. V	.
22.083	95.9346	21.39	. Q	.	.	.	. V	.
22.167	96.0806	21.19	. Q	.	.	.	. V	.
22.250	96.2253	21.00	. Q	.	.	.	. V	.
22.333	96.3687	20.82	. Q	.	.	.	. V	.
22.417	96.5108	20.64	. Q	.	.	.	. V	.
22.500	96.6518	20.47	. Q	.	.	.	. V	.
22.583	96.7915	20.29	. Q	.	.	.	. V	.
22.667	96.9301	20.12	. Q	.	.	.	. V	.
22.750	97.0676	19.96	. Q	.	.	.	. V	.
22.833	97.2039	19.80	. Q	.	.	.	. V	.
22.917	97.3392	19.64	. Q	.	.	.	. V	.
23.000	97.4734	19.49	. Q	.	.	.	. V	.
23.083	97.6065	19.33	. Q	.	.	.	. V	.
23.167	97.7387	19.19	. Q	.	.	.	. V	.
23.250	97.8698	19.04	. Q	.	.	.	. V	.

23.333	97.9999	18.90	Q	.	.	.	V.
23.417	98.1291	18.76	Q	.	.	.	V.
23.500	98.2574	18.62	Q	.	.	.	V.
23.583	98.3847	18.48	Q	.	.	.	V.
23.667	98.5111	18.35	Q	.	.	.	V.
23.750	98.6366	18.22	Q	.	.	.	V.
23.833	98.7612	18.09	Q	.	.	.	V.
23.917	98.8849	17.97	Q	.	.	.	V.
24.000	99.0078	17.85	Q	.	.	.	V.
24.083	99.1274	17.36	Q	.	.	.	V.
24.167	99.2334	15.38	Q	.	.	.	V.
24.250	99.3138	11.68	Q	.	.	.	V.
24.333	99.3618	6.97	Q	.	.	.	V.
24.417	99.3854	3.43	Q	.	.	.	V.
24.500	99.3965	1.60	Q	.	.	.	V.
24.583	99.4014	0.71	Q	.	.	.	V.
24.667	99.4037	0.34	Q	.	.	.	V.
24.750	99.4052	0.22	Q	.	.	.	V.
24.833	99.4060	0.11	Q	.	.	.	V.
24.917	99.4063	0.05	Q	.	.	.	V.
25.000	99.4064	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1500.0
10%	210.0
20%	60.0
30%	40.0
40%	30.0
50%	25.0
60%	20.0
70%	15.0
80%	10.0
90%	10.0

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

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

WATERSHED AREA = 117.200 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.384 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.283
LOW LOSS FRACTION = 0.507

HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.34
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.72
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 0.95
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.59
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.20
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 3.68

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 21.701

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.264	17.920
2	5.501	60.045
3	15.795	145.916
4	29.694	196.996
5	47.154	247.483
6	64.946	252.173
7	78.379	190.394
8	87.036	122.709
9	92.184	72.971
10	95.513	47.182
11	97.421	27.046
12	98.273	12.074
13	98.680	5.767
14	99.087	5.766
15	99.494	5.766
16	99.900	5.766
17	100.000	1.411

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 16.1974
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 19.6405

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q(CFS)	0.	50.0	100.0	150.0	200.0
0.083	0.0003	0.04	Q	.	.	.	.
0.167	0.0015	0.18	Q	.	.	.	.
0.250	0.0052	0.52	Q	.	.	.	.
0.333	0.0120	0.99	Q	.	.	.	.
0.417	0.0228	1.57	Q	.	.	.	.
0.500	0.0377	2.17	Q	.	.	.	.
0.583	0.0557	2.62	Q	.	.	.	.
0.667	0.0758	2.91	Q	.	.	.	.
0.750	0.0971	3.10	Q	.	.	.	.
0.833	0.1193	3.22	Q	.	.	.	.
0.917	0.1419	3.29	Q	.	.	.	.
1.000	0.1649	3.33	Q	.	.	.	.
1.083	0.1880	3.35	Q	.	.	.	.
1.167	0.2112	3.38	Q	.	.	.	.
1.250	0.2347	3.40	Q	.	.	.	.
1.333	0.2583	3.43	Q	.	.	.	.
1.417	0.2820	3.44	Q	.	.	.	.
1.500	0.3058	3.46	Q	.	.	.	.
1.583	0.3297	3.47	Q	.	.	.	.
1.667	0.3537	3.48	Q	.	.	.	.
1.750	0.3777	3.49	Q	.	.	.	.
1.833	0.4019	3.51	Q	.	.	.	.
1.917	0.4261	3.52	Q	.	.	.	.
2.000	0.4504	3.53	Q	.	.	.	.
2.083	0.4749	3.54	Q	.	.	.	.
2.167	0.4993	3.56	QV	.	.	.	.
2.250	0.5239	3.57	QV	.	.	.	.
2.333	0.5486	3.58	QV	.	.	.	.
2.417	0.5734	3.60	QV	.	.	.	.
2.500	0.5982	3.61	QV	.	.	.	.
2.583	0.6232	3.62	QV	.	.	.	.
2.667	0.6482	3.64	QV	.	.	.	.
2.750	0.6734	3.65	QV	.	.	.	.
2.833	0.6986	3.67	QV	.	.	.	.
2.917	0.7240	3.68	QV	.	.	.	.
3.000	0.7494	3.69	QV	.	.	.	.
3.083	0.7750	3.71	QV	.	.	.	.
3.167	0.8006	3.72	QV	.	.	.	.
3.250	0.8263	3.74	QV	.	.	.	.
3.333	0.8522	3.75	QV	.	.	.	.
3.417	0.8781	3.77	QV	.	.	.	.
3.500	0.9042	3.78	QV	.	.	.	.
3.583	0.9303	3.80	QV	.	.	.	.
3.667	0.9566	3.81	QV	.	.	.	.
3.750	0.9829	3.83	Q V	.	.	.	.
3.833	1.0094	3.84	Q V	.	.	.	.
3.917	1.0360	3.86	Q V	.	.	.	.

4.000	1.0627	3.88	Q V	.	.	.	.
4.083	1.0895	3.89	Q V	.	.	.	.
4.167	1.1164	3.91	Q V	.	.	.	.
4.250	1.1435	3.93	Q V	.	.	.	.
4.333	1.1706	3.94	Q V	.	.	.	.
4.417	1.1979	3.96	Q V	.	.	.	.
4.500	1.2253	3.98	Q V	.	.	.	.
4.583	1.2528	4.00	Q V	.	.	.	.
4.667	1.2805	4.01	Q V	.	.	.	.
4.750	1.3082	4.03	Q V	.	.	.	.
4.833	1.3361	4.05	Q V	.	.	.	.
4.917	1.3641	4.07	Q V	.	.	.	.
5.000	1.3923	4.09	Q V	.	.	.	.
5.083	1.4205	4.10	Q V	.	.	.	.
5.167	1.4489	4.12	Q V	.	.	.	.
5.250	1.4774	4.14	Q V	.	.	.	.
5.333	1.5061	4.16	Q V	.	.	.	.
5.417	1.5349	4.18	Q V	.	.	.	.
5.500	1.5638	4.20	Q V	.	.	.	.
5.583	1.5929	4.22	Q V	.	.	.	.
5.667	1.6221	4.24	Q V	.	.	.	.
5.750	1.6515	4.26	Q V	.	.	.	.
5.833	1.6810	4.28	Q V	.	.	.	.
5.917	1.7106	4.30	Q V	.	.	.	.
6.000	1.7404	4.33	Q V	.	.	.	.
6.083	1.7704	4.35	Q V	.	.	.	.
6.167	1.8005	4.37	Q V	.	.	.	.
6.250	1.8307	4.39	Q V	.	.	.	.
6.333	1.8611	4.41	Q V	.	.	.	.
6.417	1.8917	4.44	Q V	.	.	.	.
6.500	1.9224	4.46	Q V	.	.	.	.
6.583	1.9533	4.48	Q V	.	.	.	.
6.667	1.9843	4.51	Q V	.	.	.	.
6.750	2.0156	4.53	Q V	.	.	.	.
6.833	2.0470	4.56	Q V	.	.	.	.
6.917	2.0785	4.58	Q V	.	.	.	.
7.000	2.1102	4.61	Q V	.	.	.	.
7.083	2.1422	4.63	Q V	.	.	.	.
7.167	2.1742	4.66	Q V	.	.	.	.
7.250	2.2065	4.69	Q V	.	.	.	.
7.333	2.2390	4.71	Q V	.	.	.	.
7.417	2.2716	4.74	Q V	.	.	.	.
7.500	2.3044	4.77	Q V	.	.	.	.
7.583	2.3375	4.80	Q V	.	.	.	.
7.667	2.3707	4.82	Q V	.	.	.	.
7.750	2.4041	4.85	Q V	.	.	.	.
7.833	2.4377	4.88	Q V	.	.	.	.
7.917	2.4715	4.91	Q V	.	.	.	.
8.000	2.5056	4.94	Q V	.	.	.	.
8.083	2.5398	4.97	Q V	.	.	.	.
8.167	2.5743	5.00	.Q V	.	.	.	.
8.250	2.6090	5.04	.Q V	.	.	.	.
8.333	2.6439	5.07	.Q V	.	.	.	.
8.417	2.6790	5.10	.Q V	.	.	.	.
8.500	2.7144	5.13	.Q V	.	.	.	.
8.583	2.7500	5.17	.Q V	.	.	.	.
8.667	2.7858	5.20	.Q V	.	.	.	.
8.750	2.8219	5.24	.Q V	.	.	.	.

8.833	2.8582	5.27	.Q	V	.	.	.	.
8.917	2.8947	5.31	.Q	V	.	.	.	.
9.000	2.9316	5.35	.Q	V	.	.	.	.
9.083	2.9687	5.39	.Q	V	.	.	.	.
9.167	3.0060	5.42	.Q	V	.	.	.	.
9.250	3.0436	5.46	.Q	V	.	.	.	.
9.333	3.0815	5.50	.Q	V	.	.	.	.
9.417	3.1197	5.54	.Q	V	.	.	.	.
9.500	3.1582	5.58	.Q	V	.	.	.	.
9.583	3.1969	5.63	.Q	V	.	.	.	.
9.667	3.2360	5.67	.Q	V	.	.	.	.
9.750	3.2753	5.71	.Q	V	.	.	.	.
9.833	3.3150	5.76	.Q	V	.	.	.	.
9.917	3.3550	5.81	.Q	V	.	.	.	.
10.000	3.3953	5.85	.Q	V	.	.	.	.
10.083	3.4359	5.90	.Q	V	.	.	.	.
10.167	3.4769	5.95	.Q	V	.	.	.	.
10.250	3.5182	6.00	.Q	V	.	.	.	.
10.333	3.5599	6.05	.Q	V	.	.	.	.
10.417	3.6019	6.10	.Q	V	.	.	.	.
10.500	3.6443	6.16	.Q	V	.	.	.	.
10.583	3.6871	6.21	.Q	V	.	.	.	.
10.667	3.7302	6.27	.Q	V	.	.	.	.
10.750	3.7738	6.32	.Q	V	.	.	.	.
10.833	3.8177	6.38	.Q	V	.	.	.	.
10.917	3.8621	6.44	.Q	V	.	.	.	.
11.000	3.9069	6.50	.Q	V	.	.	.	.
11.083	3.9521	6.57	.Q	V	.	.	.	.
11.167	3.9978	6.63	.Q	V	.	.	.	.
11.250	4.0439	6.70	.Q	V	.	.	.	.
11.333	4.0905	6.77	.Q	V	.	.	.	.
11.417	4.1376	6.84	.Q	V	.	.	.	.
11.500	4.1851	6.91	.Q	V	.	.	.	.
11.583	4.2332	6.98	.Q	V	.	.	.	.
11.667	4.2818	7.06	.Q	V	.	.	.	.
11.750	4.3309	7.13	.Q	V	.	.	.	.
11.833	4.3806	7.21	.Q	V	.	.	.	.
11.917	4.4309	7.30	.Q	V	.	.	.	.
12.000	4.4817	7.38	.Q	V	.	.	.	.
12.083	4.5334	7.50	.Q	V	.	.	.	.
12.167	4.5863	7.68	.Q	V	.	.	.	.
12.250	4.6414	8.00	.Q	V	.	.	.	.
12.333	4.6992	8.40	.Q	V	.	.	.	.
12.417	4.7604	8.88	.Q	V	.	.	.	.
12.500	4.8250	9.38	.Q	V	.	.	.	.
12.583	4.8923	9.78	.Q	V	.	.	.	.
12.667	4.9618	10.08	.Q	V	.	.	.	.
12.750	5.0328	10.32	.Q	V	.	.	.	.
12.833	5.1053	10.52	.Q	V	.	.	.	.
12.917	5.1789	10.69	.Q	V	.	.	.	.
13.000	5.2535	10.84	.Q	V	.	.	.	.
13.083	5.3292	10.99	.Q	V	.	.	.	.
13.167	5.4060	11.14	.Q	.V	.	.	.	.
13.250	5.4838	11.30	.Q	.V	.	.	.	.
13.333	5.5628	11.47	.Q	.V	.	.	.	.
13.417	5.6430	11.64	.Q	.V	.	.	.	.
13.500	5.7243	11.81	.Q	.V	.	.	.	.
13.583	5.8068	11.99	.Q	.V	.	.	.	.

13.667	5.8907	12.17	.Q	.V	.	.	.	.
13.750	5.9759	12.37	.Q	.V	.	.	.	.
13.833	6.0625	12.57	.Q	.V	.	.	.	.
13.917	6.1506	12.79	.Q	.V	.	.	.	.
14.000	6.2402	13.02	.Q	.V	.	.	.	.
14.083	6.3316	13.27	.Q	.V	.	.	.	.
14.167	6.4251	13.57	.Q	.V	.	.	.	.
14.250	6.5213	13.97	.Q	.V	.	.	.	.
14.333	6.6206	14.42	.Q	.V	.	.	.	.
14.417	6.7234	14.94	.Q	.V	.	.	.	.
14.500	6.8300	15.47	.Q	.V	.	.	.	.
14.583	6.9400	15.98	.Q	.V	.	.	.	.
14.667	7.0533	16.45	.Q	.V	.	.	.	.
14.750	7.1698	16.91	.Q	.V	.	.	.	.
14.833	7.2894	17.37	.Q	.V	.	.	.	.
14.917	7.4123	17.85	.Q	.V	.	.	.	.
15.000	7.5387	18.35	.Q	.V	.	.	.	.
15.083	7.6688	18.90	.Q	.V	.	.	.	.
15.167	7.8031	19.49	.Q	.V	.	.	.	.
15.250	7.9419	20.16	.Q	.V	.	.	.	.
15.333	8.0858	20.89	.Q	.V	.	.	.	.
15.417	8.2348	21.64	.Q	.V	.	.	.	.
15.500	8.3885	22.31	.Q	.V	.	.	.	.
15.583	8.5453	22.77	.Q	.V	.	.	.	.
15.667	8.7050	23.18	.Q	.V	.	.	.	.
15.750	8.8681	23.69	.Q	.V	.	.	.	.
15.833	9.0382	24.69	.Q	.V	.	.	.	.
15.917	9.2253	27.17	.Q	.V	.	.	.	.
16.000	9.4468	32.16	.Q	.V	.	.	.	.
16.083	9.7547	44.71	.Q	.V	.	.	.	.
16.167	10.2050	65.39	.Q	.V	.	.	.	.
16.250	10.8610	95.25	.Q	.V	.	.	.	.
16.333	11.6441	113.71	.Q	.V	.	.	.	.
16.417	12.5108	125.84	.Q	.V	.	.	.	.
16.500	13.3428	120.81	.Q	.V	.	.	.	.
16.583	14.0097	96.83	.Q	.V	.	.	.	.
16.667	14.5023	71.52	.Q	.V	.	.	.	.
16.750	14.8648	52.64	.Q	.V	.	.	.	.
16.833	15.1495	41.35	.Q	.V	.	.	.	.
16.917	15.3749	32.72	.Q	.V	.	.	.	.
17.000	15.5567	26.40	.Q	.V	.	.	.	.
17.083	15.7151	22.99	.Q	.V	.	.	.	.
17.167	15.8636	21.57	.Q	.V	.	.	.	.
17.250	16.0030	20.24	.Q	.V	.	.	.	.
17.333	16.1327	18.83	.Q	.V	.	.	.	.
17.417	16.2464	16.52	.Q	.V	.	.	.	.
17.500	16.3505	15.11	.Q	.V	.	.	.	.
17.583	16.4489	14.29	.Q	.V	.	.	.	.
17.667	16.5428	13.63	.Q	.V	.	.	.	.
17.750	16.6328	13.07	.Q	.V	.	.	.	.
17.833	16.7195	12.58	.Q	.V	.	.	.	.
17.917	16.8032	12.15	.Q	.V	.	.	.	.
18.000	16.8843	11.77	.Q	.V	.	.	.	.
18.083	16.9628	11.41	.Q	.V	.	.	.	.
18.167	17.0386	11.00	.Q	.V	.	.	.	.
18.250	17.1108	10.49	.Q	.V	.	.	.	.
18.333	17.1791	9.92	.Q	.V	.	.	.	.
18.417	17.2431	9.29	.Q	.V	.	.	.	.

18.500	17.3029	8.68	.Q	.	.	.	V	.
18.583	17.3593	8.18	.Q	.	.	.	V	.
18.667	17.4130	7.80	.Q	.	.	.	V	.
18.750	17.4647	7.51	.Q	.	.	.	V	.
18.833	17.5148	7.27	.Q	.	.	.	V	.
18.917	17.5636	7.07	.Q	.	.	.	V	.
19.000	17.6111	6.91	.Q	.	.	.	V	.
19.083	17.6577	6.76	.Q	.	.	.	V	.
19.167	17.7032	6.62	.Q	.	.	.	V	.
19.250	17.7479	6.48	.Q	.	.	.	V	.
19.333	17.7916	6.35	.Q	.	.	.	V	.
19.417	17.8345	6.23	.Q	.	.	.	V	.
19.500	17.8767	6.12	.Q	.	.	.	V	.
19.583	17.9182	6.02	.Q	.	.	.	V	.
19.667	17.9589	5.92	.Q	.	.	.	V	.
19.750	17.9991	5.82	.Q	.	.	.	V	.
19.833	18.0385	5.73	.Q	.	.	.	V	.
19.917	18.0774	5.64	.Q	.	.	.	V	.
20.000	18.1157	5.56	.Q	.	.	.	V	.
20.083	18.1534	5.48	.Q	.	.	.	V	.
20.167	18.1906	5.40	.Q	.	.	.	V	.
20.250	18.2273	5.32	.Q	.	.	.	V	.
20.333	18.2634	5.25	.Q	.	.	.	V	.
20.417	18.2991	5.18	.Q	.	.	.	V	.
20.500	18.3343	5.11	.Q	.	.	.	V	.
20.583	18.3691	5.05	.Q	.	.	.	V	.
20.667	18.4034	4.98	Q	.	.	.	V	.
20.750	18.4373	4.92	Q	.	.	.	V	.
20.833	18.4708	4.86	Q	.	.	.	V	.
20.917	18.5039	4.80	Q	.	.	.	V	.
21.000	18.5366	4.75	Q	.	.	.	V	.
21.083	18.5689	4.69	Q	.	.	.	V	.
21.167	18.6009	4.64	Q	.	.	.	V	.
21.250	18.6325	4.59	Q	.	.	.	V	.
21.333	18.6638	4.54	Q	.	.	.	V	.
21.417	18.6947	4.49	Q	.	.	.	V	.
21.500	18.7253	4.45	Q	.	.	.	V	.
21.583	18.7556	4.40	Q	.	.	.	V	.
21.667	18.7856	4.35	Q	.	.	.	V	.
21.750	18.8153	4.31	Q	.	.	.	V	.
21.833	18.8447	4.27	Q	.	.	.	V	.
21.917	18.8738	4.23	Q	.	.	.	V	.
22.000	18.9027	4.19	Q	.	.	.	V	.
22.083	18.9313	4.15	Q	.	.	.	V	.
22.167	18.9596	4.11	Q	.	.	.	V	.
22.250	18.9876	4.07	Q	.	.	.	V	.
22.333	19.0154	4.04	Q	.	.	.	V	.
22.417	19.0430	4.00	Q	.	.	.	V	.
22.500	19.0703	3.97	Q	.	.	.	V	.
22.583	19.0973	3.93	Q	.	.	.	V	.
22.667	19.1242	3.90	Q	.	.	.	V	.
22.750	19.1508	3.87	Q	.	.	.	V	.
22.833	19.1772	3.83	Q	.	.	.	V	.
22.917	19.2034	3.80	Q	.	.	.	V	.
23.000	19.2294	3.77	Q	.	.	.	V	.
23.083	19.2551	3.74	Q	.	.	.	V	.
23.167	19.2807	3.71	Q	.	.	.	V	.
23.250	19.3061	3.68	Q	.	.	.	V	.

23.333	19.3312	3.66	Q	.	.	.	V	.
23.417	19.3562	3.63	Q	.	.	.	V	.
23.500	19.3810	3.60	Q	.	.	.	V	.
23.583	19.4056	3.57	Q	.	.	.	V	.
23.667	19.4300	3.55	Q	.	.	.	V	.
23.750	19.4543	3.52	Q	.	.	.	V	.
23.833	19.4784	3.50	Q	.	.	.	V	.
23.917	19.5023	3.47	Q	.	.	.	V	.
24.000	19.5261	3.45	Q	.	.	.	V	.
24.083	19.5493	3.38	Q	.	.	.	V	.
24.167	19.5715	3.22	Q	.	.	.	V	.
24.250	19.5912	2.86	Q	.	.	.	V	.
24.333	19.6076	2.38	Q	.	.	.	V	.
24.417	19.6198	1.78	Q	.	.	.	V	.
24.500	19.6280	1.18	Q	.	.	.	V	.
24.583	19.6330	0.73	Q	.	.	.	V	.
24.667	19.6360	0.44	Q	.	.	.	V	.
24.750	19.6378	0.26	Q	.	.	.	V	.
24.833	19.6388	0.15	Q	.	.	.	V	.
24.917	19.6394	0.09	Q	.	.	.	V	.
25.000	19.6398	0.06	Q	.	.	.	V	.
25.083	19.6401	0.04	Q	.	.	.	V	.
25.167	19.6404	0.03	Q	.	.	.	V	.
25.250	19.6405	0.02	Q	.	.	.	V	.
25.333	19.6405	0.00	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1520.0
10%	235.0
20%	70.0
30%	50.0
40%	40.0
50%	35.0
60%	25.0
70%	25.0
80%	15.0
90%	15.0

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

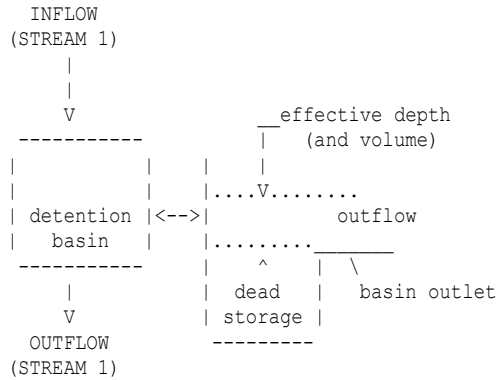
>>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<

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

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

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

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN

SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

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

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MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH(FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME (AF)
0.083	0.000	0.91	0.00	0.00	0.0	0.006
0.167	0.000	5.20	0.00	0.02	0.0	0.042
0.250	0.000	13.96	0.00	0.07	0.0	0.138
0.333	0.000	25.53	0.00	0.16	0.0	0.314
0.417	0.000	36.34	0.00	0.28	0.0	0.564
0.500	0.000	43.19	0.00	0.43	0.0	0.862
0.583	0.000	47.04	0.00	0.59	0.0	1.186
0.667	0.000	49.16	0.00	0.76	0.0	1.524
0.750	0.000	50.25	0.00	0.94	0.0	1.870
0.833	0.000	50.84	0.00	1.06	0.0	2.220
0.917	0.000	51.30	0.00	1.14	0.0	2.574
1.000	0.000	51.70	0.00	1.23	0.0	2.930
1.083	0.000	52.02	0.00	1.32	0.0	3.288
1.167	0.000	52.22	0.00	1.41	0.0	3.647
1.250	0.000	52.41	0.00	1.50	0.0	4.008
1.333	0.000	52.60	0.00	1.59	0.0	4.370
1.417	0.000	52.79	0.00	1.68	0.0	4.734
1.500	0.000	52.98	0.00	1.77	0.0	5.098
1.583	0.000	53.16	0.00	1.87	0.0	5.464
1.667	0.000	53.35	0.00	1.96	0.0	5.832
1.750	0.000	53.54	0.00	2.03	0.0	6.200
1.833	0.000	53.74	0.00	2.08	0.0	6.570
1.917	0.000	53.93	0.00	2.13	0.0	6.942
2.000	0.000	54.13	0.00	2.19	0.0	7.314
2.083	0.000	54.32	0.00	2.24	0.0	7.688
2.167	0.000	54.52	0.00	2.29	0.0	8.063
2.250	0.000	54.73	0.00	2.35	0.0	8.440
2.333	0.000	54.93	0.00	2.40	0.0	8.818
2.417	0.000	55.14	0.00	2.46	0.0	9.198
2.500	0.000	55.34	0.00	2.51	0.0	9.579
2.583	0.000	55.55	0.00	2.57	0.0	9.961
2.667	0.000	55.76	0.00	2.62	0.0	10.345
2.750	0.000	55.98	0.00	2.68	0.0	10.730
2.833	0.000	56.19	0.00	2.73	0.0	11.117
2.917	0.000	56.41	0.00	2.79	0.0	11.505
3.000	0.000	56.63	0.00	2.84	0.0	11.895
3.083	0.000	56.86	0.00	2.90	0.0	12.287
3.167	0.000	57.08	0.00	2.95	0.0	12.680
3.250	0.000	57.31	0.00	3.01	0.0	13.074
3.333	0.000	57.54	0.00	3.06	0.0	13.470
3.417	0.000	57.77	0.00	3.11	0.0	13.868
3.500	0.000	58.00	0.00	3.16	0.0	14.267
3.583	0.000	58.24	0.00	3.21	0.0	14.668
3.667	0.000	58.48	0.00	3.26	0.0	15.070
3.750	0.000	58.72	0.00	3.31	0.0	15.474
3.833	0.000	58.97	0.00	3.36	0.0	15.880
3.917	0.000	59.21	0.00	3.41	0.0	16.288

4.000	0.000	59.46	0.00	3.46	0.0	16.697
4.083	0.000	59.72	0.00	3.51	0.0	17.108
4.167	0.000	59.97	0.00	3.57	0.0	17.521
4.250	0.000	60.23	0.00	3.62	0.0	17.935
4.333	0.000	60.49	0.00	3.67	0.0	18.352
4.417	0.000	60.76	0.00	3.72	0.0	18.770
4.500	0.000	61.02	0.00	3.77	0.0	19.190
4.583	0.000	61.29	0.00	3.83	0.0	19.612
4.667	0.000	61.57	0.00	3.88	0.0	20.035
4.750	0.000	61.84	0.00	3.93	0.0	20.461
4.833	0.000	62.12	0.00	3.99	0.0	20.889
4.917	0.000	62.41	0.00	4.04	0.0	21.318
5.000	0.000	62.69	0.00	4.08	0.0	21.749
5.083	0.000	62.98	0.00	4.13	0.0	22.183
5.167	0.000	63.28	0.00	4.18	0.0	22.618
5.250	0.000	63.57	0.00	4.23	0.0	23.056
5.333	0.000	63.87	0.00	4.28	0.0	23.495
5.417	0.000	64.18	0.00	4.33	0.0	23.937
5.500	0.000	64.49	0.00	4.38	0.0	24.381
5.583	0.000	64.80	0.00	4.43	0.0	24.827
5.667	0.000	65.11	0.00	4.48	0.0	25.275
5.750	0.000	65.44	0.00	4.53	0.0	25.725
5.833	0.000	65.76	0.00	4.58	0.1	26.178
5.917	0.000	66.09	0.00	4.63	0.1	26.633
6.000	0.000	66.42	0.00	4.68	0.1	27.090
6.083	0.000	66.76	0.00	4.73	0.1	27.549
6.167	0.000	67.10	0.00	4.78	0.1	28.011
6.250	0.000	67.44	0.00	4.83	0.1	28.475
6.333	0.000	67.79	0.00	4.88	0.1	28.942
6.417	0.000	68.15	0.00	4.93	0.1	29.411
6.500	0.000	68.51	0.00	4.99	0.1	29.882
6.583	0.000	68.88	0.00	5.03	0.1	30.356
6.667	0.000	69.25	0.00	5.08	0.1	30.833
6.750	0.000	69.62	0.00	5.12	0.1	31.312
6.833	0.000	70.00	0.00	5.16	0.1	31.793
6.917	0.000	70.39	0.00	5.21	0.1	32.278
7.000	0.000	70.78	0.00	5.25	0.1	32.765
7.083	0.000	71.18	0.00	5.30	0.1	33.255
7.167	0.000	71.58	0.00	5.34	0.1	33.747
7.250	0.000	71.99	0.00	5.39	0.1	34.243
7.333	0.000	72.41	0.00	5.43	0.1	34.741
7.417	0.000	72.83	0.00	5.48	0.1	35.242
7.500	0.000	73.26	0.00	5.52	0.1	35.746
7.583	0.000	73.70	0.00	5.57	0.1	36.253
7.667	0.000	74.14	0.00	5.61	0.1	36.763
7.750	0.000	74.59	0.00	5.66	0.1	37.277
7.833	0.000	75.04	0.00	5.71	0.1	37.793
7.917	0.000	75.51	0.00	5.76	0.1	38.313
8.000	0.000	75.98	0.00	5.80	0.1	38.836
8.083	0.000	76.45	0.00	5.85	0.1	39.362
8.167	0.000	76.94	0.00	5.90	0.1	39.891
8.250	0.000	77.44	0.00	5.95	0.1	40.424
8.333	0.000	77.94	0.00	6.00	0.1	40.960
8.417	0.000	78.45	0.00	6.04	1.3	41.491
8.500	0.000	78.97	0.00	6.08	3.9	42.008
8.583	0.000	79.50	0.00	6.13	6.6	42.510
8.667	0.000	80.04	0.00	6.17	9.1	42.999
8.750	0.000	80.59	0.00	6.21	11.6	43.474

8.833	0.000	81.14	0.00	6.24	14.0	43.936
8.917	0.000	81.71	0.00	6.28	16.4	44.386
9.000	0.000	82.29	0.00	6.32	18.7	44.824
9.083	0.000	82.88	0.00	6.35	20.9	45.251
9.167	0.000	83.48	0.00	6.39	23.1	45.667
9.250	0.000	84.09	0.00	6.42	25.2	46.072
9.333	0.000	84.71	0.00	6.46	27.3	46.468
9.417	0.000	85.35	0.00	6.49	29.3	46.854
9.500	0.000	86.00	0.00	6.52	31.3	47.231
9.583	0.000	86.66	0.00	6.55	33.2	47.600
9.667	0.000	87.33	0.00	6.58	35.1	47.960
9.750	0.000	88.02	0.00	6.61	36.9	48.312
9.833	0.000	88.72	0.00	6.64	38.7	48.656
9.917	0.000	89.44	0.00	6.67	40.5	48.994
10.000	0.000	90.17	0.00	6.69	42.2	49.324
10.083	0.000	90.92	0.00	6.72	43.9	49.648
10.167	0.000	91.69	0.00	6.75	45.5	49.966
10.250	0.000	92.47	0.00	6.77	47.1	50.278
10.333	0.000	93.27	0.00	6.80	48.7	50.585
10.417	0.000	94.09	0.00	6.82	50.3	50.887
10.500	0.000	94.92	0.00	6.85	51.9	51.183
10.583	0.000	95.78	0.00	6.87	53.4	51.475
10.667	0.000	96.65	0.00	6.90	54.9	51.763
10.750	0.000	97.55	0.00	6.92	56.3	52.047
10.833	0.000	98.47	0.00	6.94	57.8	52.327
10.917	0.000	99.41	0.00	6.97	59.2	52.603
11.000	0.000	100.37	0.00	6.99	60.7	52.877
11.083	0.000	101.36	0.00	7.01	62.9	53.142
11.167	0.000	102.38	0.00	7.03	66.4	53.390
11.250	0.000	103.42	0.00	7.05	70.4	53.617
11.333	0.000	104.49	0.00	7.06	74.0	53.827
11.417	0.000	105.59	0.00	7.08	77.4	54.021
11.500	0.000	106.72	0.00	7.09	80.5	54.201
11.583	0.000	107.89	0.00	7.11	83.5	54.369
11.667	0.000	109.08	0.00	7.12	86.2	54.527
11.750	0.000	110.31	0.00	7.13	88.7	54.676
11.833	0.000	111.58	0.00	7.14	91.1	54.816
11.917	0.000	112.89	0.00	7.15	93.4	54.950
12.000	0.000	114.23	0.00	7.16	95.6	55.079
12.083	0.000	116.22	0.00	7.17	97.8	55.206
12.167	0.000	120.47	0.00	7.18	100.0	55.347
12.250	0.000	127.71	0.00	7.19	102.6	55.520
12.333	0.000	136.83	0.00	7.21	105.8	55.733
12.417	0.000	145.51	0.00	7.23	109.7	55.980
12.500	0.000	151.64	0.00	7.25	113.9	56.240
12.583	0.000	155.86	0.00	7.27	118.2	56.499
12.667	0.000	159.00	0.00	7.29	122.5	56.750
12.750	0.000	161.54	0.00	7.31	126.6	56.991
12.833	0.000	163.81	0.00	7.32	130.5	57.220
12.917	0.000	166.07	0.00	7.34	134.3	57.439
13.000	0.000	168.36	0.00	7.36	137.8	57.649
13.083	0.000	170.70	0.00	7.37	141.3	57.852
13.167	0.000	173.02	0.00	7.39	144.6	58.047
13.250	0.000	175.45	0.00	7.40	147.8	58.237
13.333	0.000	177.97	0.00	7.42	151.0	58.423
13.417	0.000	180.60	0.00	7.43	154.1	58.606
13.500	0.000	183.34	0.00	7.45	157.1	58.787
13.583	0.000	186.21	0.00	7.46	160.1	58.967

13.667	0.000	189.20	0.00	7.47	163.1	59.146
13.750	0.000	192.35	0.00	7.49	166.1	59.327
13.833	0.000	195.65	0.00	7.50	169.1	59.510
13.917	0.000	199.13	0.00	7.52	172.2	59.695
14.000	0.000	202.78	0.00	7.53	175.3	59.884
14.083	0.000	206.99	0.00	7.54	178.5	60.080
14.167	0.000	212.65	0.00	7.56	181.9	60.291
14.250	0.000	220.23	0.00	7.58	185.7	60.529
14.333	0.000	229.10	0.00	7.60	189.9	60.799
14.417	0.000	237.98	0.00	7.62	194.7	61.097
14.500	0.000	245.70	0.00	7.65	199.8	61.413
14.583	0.000	252.67	0.00	7.67	205.2	61.741
14.667	0.000	259.39	0.00	7.70	210.7	62.076
14.750	0.000	266.20	0.00	7.72	216.4	62.419
14.833	0.000	273.33	0.00	7.75	222.2	62.772
14.917	0.000	281.03	0.00	7.78	228.1	63.136
15.000	0.000	289.38	0.00	7.81	234.4	63.515
15.083	0.000	298.56	0.00	7.84	240.8	63.912
15.167	0.000	308.79	0.00	7.87	247.7	64.333
15.250	0.000	320.71	0.00	7.91	255.0	64.786
15.333	0.000	335.08	0.00	7.94	262.9	65.283
15.417	0.000	350.52	0.00	7.99	271.6	65.827
15.500	0.000	361.41	0.00	8.03	282.5	66.371
15.583	0.000	365.34	0.00	8.07	295.2	66.854
15.667	0.000	367.20	0.00	8.10	307.1	67.268
15.750	0.000	378.70	0.00	8.13	318.1	67.685
15.833	0.000	413.25	0.00	8.17	331.1	68.251
15.917	0.000	477.32	0.00	8.24	350.2	69.127
16.000	0.000	585.12	0.00	8.35	380.4	70.537
16.083	0.000	809.81	0.00	8.55	433.4	73.130
16.167	0.000	1222.98	0.00	8.92	530.7	77.897
16.250	0.000	1656.43	0.00	9.44	675.2	84.655
16.333	0.000	1847.44	0.00	9.97	838.6	91.603
16.417	0.000	1666.62	0.00	10.35	951.9	96.525
16.500	0.000	1224.35	0.00	10.47	992.6	98.121
16.583	0.000	866.90	0.00	10.40	996.8	97.226
16.667	0.000	640.39	0.00	10.22	977.8	94.902
16.750	0.000	498.56	0.00	9.99	945.0	91.827
16.833	0.000	414.99	0.00	9.74	887.5	88.573
16.917	0.000	368.88	0.00	9.50	813.0	85.515
17.000	0.000	334.96	0.00	9.28	743.6	82.700
17.083	0.000	305.96	0.00	9.09	680.0	80.125
17.167	0.000	276.42	0.00	8.90	619.9	77.759
17.250	0.000	258.21	0.00	8.74	562.4	75.664
17.333	0.000	241.62	0.00	8.60	510.2	73.814
17.417	0.000	226.07	0.00	8.47	464.1	72.175
17.500	0.000	213.86	0.00	8.36	423.3	70.732
17.583	0.000	204.32	0.00	8.27	387.5	69.470
17.667	0.000	196.35	0.00	8.18	356.3	68.369
17.750	0.000	189.49	0.00	8.11	329.0	67.408
17.833	0.000	183.41	0.00	8.04	305.2	66.570
17.917	0.000	177.90	0.00	7.99	285.1	65.831
18.000	0.000	172.86	0.00	7.94	270.6	65.158
18.083	0.000	167.64	0.00	7.89	259.7	64.525
18.167	0.000	160.60	0.00	7.84	249.3	63.914
18.250	0.000	150.95	0.00	7.79	239.1	63.307
18.333	0.000	139.78	0.00	7.75	228.9	62.693
18.417	0.000	129.43	0.00	7.70	218.7	62.078

18.500	0.000	121.94	0.00	7.65	208.6	61.482
18.583	0.000	116.66	0.00	7.61	198.9	60.916
18.667	0.000	112.71	0.00	7.57	189.7	60.385
18.750	0.000	109.60	0.00	7.53	181.2	59.892
18.833	0.000	106.96	0.00	7.50	173.2	59.436
18.917	0.000	104.54	0.00	7.46	165.9	59.013
19.000	0.000	102.29	0.00	7.43	159.1	58.622
19.083	0.000	100.19	0.00	7.40	152.8	58.260
19.167	0.000	98.28	0.00	7.38	147.0	57.924
19.250	0.000	96.46	0.00	7.35	141.6	57.613
19.333	0.000	94.73	0.00	7.33	136.6	57.325
19.417	0.000	93.08	0.00	7.31	132.0	57.057
19.500	0.000	91.50	0.00	7.29	127.6	56.808
19.583	0.000	89.99	0.00	7.28	123.6	56.577
19.667	0.000	88.55	0.00	7.26	119.9	56.361
19.750	0.000	87.16	0.00	7.24	116.4	56.159
19.833	0.000	85.83	0.00	7.23	113.2	55.971
19.917	0.000	84.55	0.00	7.21	110.1	55.795
20.000	0.000	83.32	0.00	7.20	107.3	55.630
20.083	0.000	82.14	0.00	7.19	104.6	55.475
20.167	0.000	81.00	0.00	7.18	102.1	55.330
20.250	0.000	79.89	0.00	7.17	99.7	55.193
20.333	0.000	78.83	0.00	7.16	97.5	55.064
20.417	0.000	77.80	0.00	7.15	95.4	54.943
20.500	0.000	76.81	0.00	7.14	93.5	54.828
20.583	0.000	75.85	0.00	7.13	91.6	54.719
20.667	0.000	74.92	0.00	7.12	89.8	54.617
20.750	0.000	74.01	0.00	7.12	88.2	54.519
20.833	0.000	73.14	0.00	7.11	86.6	54.427
20.917	0.000	72.29	0.00	7.10	85.1	54.338
21.000	0.000	71.47	0.00	7.10	83.6	54.255
21.083	0.000	70.67	0.00	7.09	82.3	54.175
21.167	0.000	69.89	0.00	7.08	81.0	54.098
21.250	0.000	69.14	0.00	7.08	79.7	54.025
21.333	0.000	68.41	0.00	7.07	78.5	53.956
21.417	0.000	67.69	0.00	7.07	77.4	53.889
21.500	0.000	67.00	0.00	7.06	76.3	53.825
21.583	0.000	66.32	0.00	7.06	75.3	53.763
21.667	0.000	65.66	0.00	7.05	74.2	53.704
21.750	0.000	65.02	0.00	7.05	73.3	53.647
21.833	0.000	64.39	0.00	7.05	72.3	53.592
21.917	0.000	63.78	0.00	7.04	71.4	53.540
22.000	0.000	63.19	0.00	7.04	70.6	53.489
22.083	0.000	62.60	0.00	7.03	69.7	53.440
22.167	0.000	62.04	0.00	7.03	68.9	53.392
22.250	0.000	61.48	0.00	7.03	68.2	53.346
22.333	0.000	60.94	0.00	7.02	67.4	53.301
22.417	0.000	60.41	0.00	7.02	66.7	53.258
22.500	0.000	59.89	0.00	7.02	66.0	53.217
22.583	0.000	59.38	0.00	7.01	65.3	53.176
22.667	0.000	58.89	0.00	7.01	64.6	53.137
22.750	0.000	58.40	0.00	7.01	64.0	53.098
22.833	0.000	57.93	0.00	7.00	63.3	53.061
22.917	0.000	57.46	0.00	7.00	62.7	53.025
23.000	0.000	57.01	0.00	7.00	62.2	52.989
23.083	0.000	56.56	0.00	7.00	61.9	52.953
23.167	0.000	56.12	0.00	6.99	61.7	52.915
23.250	0.000	55.70	0.00	6.99	61.5	52.875

23.333	0.000	55.28	0.00	6.99	61.2	52.834
23.417	0.000	54.86	0.00	6.98	61.0	52.791
23.500	0.000	54.46	0.00	6.98	60.8	52.748
23.583	0.000	54.06	0.00	6.98	60.6	52.703
23.667	0.000	53.67	0.00	6.97	60.3	52.657
23.750	0.000	53.29	0.00	6.97	60.1	52.610
23.833	0.000	52.92	0.00	6.96	59.9	52.562
23.917	0.000	52.55	0.00	6.96	59.6	52.513
24.000	0.000	52.19	0.00	6.96	59.4	52.464
24.083	0.000	50.92	0.00	6.95	59.1	52.408
24.167	0.000	46.30	0.00	6.94	58.7	52.322
24.250	0.000	37.26	0.00	6.93	58.1	52.179
24.333	0.000	25.51	0.00	6.91	57.2	51.960
24.417	0.000	14.64	0.00	6.89	55.9	51.676
24.500	0.000	7.81	0.00	6.86	54.3	51.356
24.583	0.000	4.06	0.00	6.84	52.7	51.021
24.667	0.000	2.07	0.00	6.81	50.9	50.685
24.750	0.000	1.13	0.00	6.78	49.2	50.354
24.833	0.000	0.71	0.00	6.75	47.5	50.031
24.917	0.000	0.42	0.00	6.73	45.9	49.718
25.000	0.000	0.20	0.00	6.70	44.3	49.415
25.083	0.000	0.04	0.00	6.68	42.7	49.121
25.167	0.000	0.03	0.00	6.65	41.2	48.837
25.250	0.000	0.02	0.00	6.63	39.8	48.563
25.333	0.000	0.00	0.00	6.61	38.4	48.298
25.417	0.000	0.00	0.00	6.59	37.1	48.043
25.500	0.000	0.00	0.00	6.57	35.8	47.796
25.583	0.000	0.00	0.00	6.55	34.5	47.559
25.667	0.000	0.00	0.00	6.53	33.3	47.329
25.750	0.000	0.00	0.00	6.51	32.2	47.108
25.833	0.000	0.00	0.00	6.49	31.0	46.894
25.917	0.000	0.00	0.00	6.47	30.0	46.688
26.000	0.000	0.00	0.00	6.46	28.9	46.489
26.083	0.000	0.00	0.00	6.44	27.9	46.296
26.167	0.000	0.00	0.00	6.43	26.9	46.111
26.250	0.000	0.00	0.00	6.41	26.0	45.932
26.333	0.000	0.00	0.00	6.40	25.1	45.759
26.417	0.000	0.00	0.00	6.38	24.2	45.593
26.500	0.000	0.00	0.00	6.37	23.4	45.432
26.583	0.000	0.00	0.00	6.36	22.5	45.277
26.667	0.000	0.00	0.00	6.34	21.8	45.127
26.750	0.000	0.00	0.00	6.33	21.0	44.982
26.833	0.000	0.00	0.00	6.32	20.3	44.843
26.917	0.000	0.00	0.00	6.31	19.6	44.708
27.000	0.000	0.00	0.00	6.30	18.9	44.578
27.083	0.000	0.00	0.00	6.29	18.2	44.453
27.167	0.000	0.00	0.00	6.28	17.6	44.332
27.250	0.000	0.00	0.00	6.27	17.0	44.215
27.333	0.000	0.00	0.00	6.26	16.4	44.102
27.417	0.000	0.00	0.00	6.25	15.8	43.993
27.500	0.000	0.00	0.00	6.24	15.2	43.888
27.583	0.000	0.00	0.00	6.23	14.7	43.787
27.667	0.000	0.00	0.00	6.22	14.2	43.689
27.750	0.000	0.00	0.00	6.22	13.7	43.595
27.833	0.000	0.00	0.00	6.21	13.2	43.504
27.917	0.000	0.00	0.00	6.20	12.8	43.416
28.000	0.000	0.00	0.00	6.19	12.3	43.331
28.083	0.000	0.00	0.00	6.19	11.9	43.249

28.167	0.000	0.00	0.00	6.18	11.5	43.170
28.250	0.000	0.00	0.00	6.17	11.1	43.094
28.333	0.000	0.00	0.00	6.17	10.7	43.020
28.417	0.000	0.00	0.00	6.16	10.3	42.949
28.500	0.000	0.00	0.00	6.16	10.0	42.881
28.583	0.000	0.00	0.00	6.15	9.6	42.815
28.667	0.000	0.00	0.00	6.15	9.3	42.751
28.750	0.000	0.00	0.00	6.14	8.9	42.689
28.833	0.000	0.00	0.00	6.14	8.6	42.630
28.917	0.000	0.00	0.00	6.13	8.3	42.573
29.000	0.000	0.00	0.00	6.13	8.0	42.517
29.083	0.000	0.00	0.00	6.12	7.8	42.464
29.167	0.000	0.00	0.00	6.12	7.5	42.412
29.250	0.000	0.00	0.00	6.11	7.2	42.362
29.333	0.000	0.00	0.00	6.11	7.0	42.314
29.417	0.000	0.00	0.00	6.11	6.7	42.268
29.500	0.000	0.00	0.00	6.10	6.5	42.223
29.583	0.000	0.00	0.00	6.10	6.3	42.180
29.667	0.000	0.00	0.00	6.09	6.0	42.138
29.750	0.000	0.00	0.00	6.09	5.8	42.098
29.833	0.000	0.00	0.00	6.09	5.6	42.059
29.917	0.000	0.00	0.00	6.09	5.4	42.022

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 287.165 AF
 BASIN STORAGE = 36.768 AF (WITH 0.000 AF INITIALLY FILLED)
 OUTFLOW VOLUME = 250.385 AF
 LOSS VOLUME = 0.000 AF

FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 11

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

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	250.0	500.0	750.0	1000.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0000	0.00	Q	.	.	.	.
0.417	0.0000	0.00	Q	.	.	.	.
0.500	0.0001	0.00	Q	.	.	.	.
0.583	0.0001	0.01	Q	.	.	.	.
0.667	0.0001	0.01	Q	.	.	.	.
0.750	0.0002	0.01	Q	.	.	.	.
0.833	0.0003	0.01	Q	.	.	.	.
0.917	0.0004	0.01	Q	.	.	.	.
1.000	0.0005	0.01	Q	.	.	.	.
1.083	0.0006	0.01	Q	.	.	.	.
1.167	0.0007	0.02	Q	.	.	.	.
1.250	0.0008	0.02	Q	.	.	.	.
1.333	0.0009	0.02	Q	.	.	.	.
1.417	0.0010	0.02	Q	.	.	.	.

1.500	0.0011	0.02	Q	.	.	.	.
1.583	0.0013	0.02	Q	.	.	.	.
1.667	0.0014	0.02	Q	.	.	.	.
1.750	0.0016	0.02	Q	.	.	.	.
1.833	0.0017	0.02	Q	.	.	.	.
1.917	0.0019	0.02	Q	.	.	.	.
2.000	0.0021	0.02	Q	.	.	.	.
2.083	0.0022	0.02	Q	.	.	.	.
2.167	0.0024	0.02	Q	.	.	.	.
2.250	0.0026	0.03	Q	.	.	.	.
2.333	0.0028	0.03	Q	.	.	.	.
2.417	0.0029	0.03	Q	.	.	.	.
2.500	0.0031	0.03	Q	.	.	.	.
2.583	0.0033	0.03	Q	.	.	.	.
2.667	0.0035	0.03	Q	.	.	.	.
2.750	0.0037	0.03	Q	.	.	.	.
2.833	0.0039	0.03	Q	.	.	.	.
2.917	0.0041	0.03	Q	.	.	.	.
3.000	0.0043	0.03	Q	.	.	.	.
3.083	0.0046	0.03	Q	.	.	.	.
3.167	0.0048	0.03	Q	.	.	.	.
3.250	0.0050	0.03	Q	.	.	.	.
3.333	0.0052	0.03	Q	.	.	.	.
3.417	0.0055	0.03	Q	.	.	.	.
3.500	0.0057	0.03	Q	.	.	.	.
3.583	0.0059	0.04	Q	.	.	.	.
3.667	0.0062	0.04	Q	.	.	.	.
3.750	0.0064	0.04	Q	.	.	.	.
3.833	0.0067	0.04	Q	.	.	.	.
3.917	0.0069	0.04	Q	.	.	.	.
4.000	0.0072	0.04	Q	.	.	.	.
4.083	0.0075	0.04	Q	.	.	.	.
4.167	0.0077	0.04	Q	.	.	.	.
4.250	0.0080	0.04	Q	.	.	.	.
4.333	0.0083	0.04	Q	.	.	.	.
4.417	0.0086	0.04	Q	.	.	.	.
4.500	0.0089	0.04	Q	.	.	.	.
4.583	0.0091	0.04	Q	.	.	.	.
4.667	0.0094	0.04	Q	.	.	.	.
4.750	0.0097	0.04	Q	.	.	.	.
4.833	0.0100	0.04	Q	.	.	.	.
4.917	0.0103	0.04	Q	.	.	.	.
5.000	0.0106	0.04	Q	.	.	.	.
5.083	0.0110	0.05	Q	.	.	.	.
5.167	0.0113	0.05	Q	.	.	.	.
5.250	0.0116	0.05	Q	.	.	.	.
5.333	0.0119	0.05	Q	.	.	.	.
5.417	0.0122	0.05	Q	.	.	.	.
5.500	0.0126	0.05	Q	.	.	.	.
5.583	0.0129	0.05	Q	.	.	.	.
5.667	0.0132	0.05	Q	.	.	.	.
5.750	0.0136	0.05	Q	.	.	.	.
5.833	0.0139	0.05	Q	.	.	.	.
5.917	0.0143	0.05	Q	.	.	.	.
6.000	0.0146	0.05	Q	.	.	.	.
6.083	0.0150	0.05	Q	.	.	.	.
6.167	0.0153	0.05	Q	.	.	.	.
6.250	0.0157	0.05	Q	.	.	.	.

6.333	0.0161	0.05	Q	.	.	.	.
6.417	0.0164	0.05	Q	.	.	.	.
6.500	0.0168	0.05	Q	.	.	.	.
6.583	0.0172	0.06	Q	.	.	.	.
6.667	0.0176	0.06	Q	.	.	.	.
6.750	0.0180	0.06	Q	.	.	.	.
6.833	0.0184	0.06	Q	.	.	.	.
6.917	0.0187	0.06	Q	.	.	.	.
7.000	0.0191	0.06	Q	.	.	.	.
7.083	0.0195	0.06	Q	.	.	.	.
7.167	0.0199	0.06	Q	.	.	.	.
7.250	0.0204	0.06	Q	.	.	.	.
7.333	0.0208	0.06	Q	.	.	.	.
7.417	0.0212	0.06	Q	.	.	.	.
7.500	0.0216	0.06	Q	.	.	.	.
7.583	0.0220	0.06	Q	.	.	.	.
7.667	0.0224	0.06	Q	.	.	.	.
7.750	0.0229	0.06	Q	.	.	.	.
7.833	0.0233	0.06	Q	.	.	.	.
7.917	0.0237	0.06	Q	.	.	.	.
8.000	0.0242	0.06	Q	.	.	.	.
8.083	0.0246	0.06	Q	.	.	.	.
8.167	0.0251	0.06	Q	.	.	.	.
8.250	0.0255	0.07	Q	.	.	.	.
8.333	0.0260	0.07	Q	.	.	.	.
8.417	0.0351	1.33	Q	.	.	.	.
8.500	0.0622	3.94	Q	.	.	.	.
8.583	0.1075	6.56	Q	.	.	.	.
8.667	0.1703	9.12	Q	.	.	.	.
8.750	0.2502	11.61	Q	.	.	.	.
8.833	0.3468	14.03	Q	.	.	.	.
8.917	0.4596	16.38	Q	.	.	.	.
9.000	0.5882	18.67	Q	.	.	.	.
9.083	0.7322	20.90	Q	.	.	.	.
9.167	0.8911	23.08	Q	.	.	.	.
9.250	1.0647	25.20	VQ	.	.	.	.
9.333	1.2525	27.27	VQ	.	.	.	.
9.417	1.4542	29.28	VQ	.	.	.	.
9.500	1.6694	31.25	VQ	.	.	.	.
9.583	1.8979	33.18	VQ	.	.	.	.
9.667	2.1393	35.06	VQ	.	.	.	.
9.750	2.3934	36.89	VQ	.	.	.	.
9.833	2.6599	38.69	VQ	.	.	.	.
9.917	2.9385	40.45	VQ	.	.	.	.
10.000	3.2290	42.18	VQ	.	.	.	.
10.083	3.5311	43.87	VQ	.	.	.	.
10.167	3.8446	45.52	VQ	.	.	.	.
10.250	4.1693	47.15	VQ	.	.	.	.
10.333	4.5050	48.74	VQ	.	.	.	.
10.417	4.8515	50.31	V Q	.	.	.	.
10.500	5.2087	51.86	V Q	.	.	.	.
10.583	5.5763	53.38	V Q	.	.	.	.
10.667	5.9542	54.87	V Q	.	.	.	.
10.750	6.3423	56.35	.VQ	.	.	.	.
10.833	6.7403	57.80	.VQ	.	.	.	.
10.917	7.1483	59.24	.VQ	.	.	.	.
11.000	7.5661	60.66	.VQ	.	.	.	.
11.083	7.9990	62.87	.VQ	.	.	.	.

11.167	8.4566	66.44	.VQ	.	.	.	.
11.250	8.9414	70.40	.VQ	.	.	.	.
11.333	9.4514	74.05	.VQ	.	.	.	.
11.417	9.9846	77.42	.V Q	.	.	.	.
11.500	10.5393	80.54	.V Q	.	.	.	.
11.583	11.1140	83.45	.V Q	.	.	.	.
11.667	11.7075	86.17	.V Q	.	.	.	.
11.750	12.3186	88.73	.V Q	.	.	.	.
11.833	12.9463	91.15	. VQ	.	.	.	.
11.917	13.5898	93.44	. VQ	.	.	.	.
12.000	14.2484	95.63	. VQ	.	.	.	.
12.083	14.9217	97.76	. VQ	.	.	.	.
12.167	15.6104	100.00	. VQ	.	.	.	.
12.250	16.3171	102.61	. V Q	.	.	.	.
12.333	17.0460	105.84	. V Q	.	.	.	.
12.417	17.8013	109.68	. V Q	.	.	.	.
12.500	18.5858	113.91	. V Q	.	.	.	.
12.583	19.4001	118.24	. VQ	.	.	.	.
12.667	20.2438	122.50	. VQ	.	.	.	.
12.750	21.1157	126.61	. V Q	.	.	.	.
12.833	22.0147	130.53	. V Q	.	.	.	.
12.917	22.9394	134.27	. V Q	.	.	.	.
13.000	23.8887	137.85	. V Q	.	.	.	.
13.083	24.8618	141.29	. V Q	.	.	.	.
13.167	25.8578	144.62	. VQ	.	.	.	.
13.250	26.8760	147.84	. VQ	.	.	.	.
13.333	27.9158	150.98	. V Q	.	.	.	.
13.417	28.9767	154.05	. V Q	.	.	.	.
13.500	30.0586	157.09	. V Q	.	.	.	.
13.583	31.1612	160.10	. V Q	.	.	.	.
13.667	32.2845	163.10	. VQ	.	.	.	.
13.750	33.4285	166.11	. VQ	.	.	.	.
13.833	34.5933	169.14	. VQ	.	.	.	.
13.917	35.7793	172.21	. VQ	.	.	.	.
14.000	36.9869	175.33	. V Q	.	.	.	.
14.083	38.2165	178.55	. VQ	.	.	.	.
14.167	39.4696	181.95	. VQ	.	.	.	.
14.250	40.7485	185.70	. VQ	.	.	.	.
14.333	42.0566	189.93	. VQ	.	.	.	.
14.417	43.3973	194.67	. VQ	.	.	.	.
14.500	44.7734	199.80	. Q	.	.	.	.
14.583	46.1864	205.17	. VQ	.	.	.	.
14.667	47.6375	210.70	. VQ	.	.	.	.
14.750	49.1276	216.36	. VQ	.	.	.	.
14.833	50.6576	222.17	. Q	.	.	.	.
14.917	52.2289	228.15	. VQ.	.	.	.	.
15.000	53.8429	234.35	. VQ.	.	.	.	.
15.083	55.5015	240.83	. VQ.	.	.	.	.
15.167	57.2072	247.66	. Q.	.	.	.	.
15.250	58.9631	254.96	. VQ	.	.	.	.
15.333	60.7736	262.89	. VQ	.	.	.	.
15.417	62.6440	271.57	. Q	.	.	.	.
15.500	64.5893	282.46	. VQ	.	.	.	.
15.583	66.6223	295.20	. VQ	.	.	.	.
15.667	68.7371	307.07	. V Q	.	.	.	.
15.750	70.9277	318.07	. VQ	.	.	.	.
15.833	73.2079	331.08	. V Q	.	.	.	.
15.917	75.6195	350.16	. V Q	.	.	.	.

16.000	78.2393	380.40	.	.	. V Q	.	.	.
16.083	81.2238	433.36	.	.	. V Q	.	.	.
16.167	84.8791	530.74	.	.	. V	.Q	.	.
16.250	89.5291	675.18	.	.	. V	.	Q	.
16.333	95.3045	838.59	.	.	. V	.	.	Q
16.417	101.8605	951.94	.	.	. V	.	.	Q
16.500	108.6969	992.65	.	.	. V	.	.	Q
16.583	115.5618	996.77	.	.	. V	.	.	Q
16.667	122.2962	977.83	.	.	. V.	.	.	Q
16.750	128.8047	945.04	.	.	. V	.	.	Q
16.833	134.9170	887.50	.	.	. V	.	.	Q
16.917	140.5159	812.96	.	.	. V	.	Q	.
17.000	145.6372	743.62	.	.	. V	.	Q	.
17.083	150.3202	679.97	.	.	. V	Q	.	.
17.167	154.5892	619.86	.	.	. Q	.	.	.
17.250	158.4628	562.44	.	.	. Q	V	.	.
17.333	161.9769	510.24	.	.	. Q	V	.	.
17.417	165.1730	464.08	.	.	. Q	V	.	.
17.500	168.0884	423.31	.	.	. Q	V	.	.
17.583	170.7573	387.53	.	.	. Q	V	.	.
17.667	173.2109	356.26	.	.	. Q	V	.	.
17.750	175.4766	328.98	.	.	. Q	V	.	.
17.833	177.5783	305.17	.	.	. Q	V	.	.
17.917	179.5420	285.13	.	.	. Q	V	.	.
18.000	181.4055	270.57	.	.	. Q	V	.	.
18.083	183.1938	259.66	.	.	. Q	V	.	.
18.167	184.9106	249.28	.	.	. Q	V	.	.
18.250	186.5573	239.11	.	.	. Q	V	.	.
18.333	188.1339	228.92	.	.	. Q	V	.	.
18.417	189.6399	218.67	.	.	. Q	V	.	.
18.500	191.0762	208.56	.	.	. Q	V	.	.
18.583	192.4458	198.86	.	.	. Q	V	.	.
18.667	193.7523	189.71	.	.	. Q	V	.	.
18.750	195.0000	181.17	.	.	. Q	V	.	.
18.833	196.1931	173.24	.	.	. Q	V	.	.
18.917	197.3357	165.90	.	.	. Q	V	.	.
19.000	198.4315	159.11	.	.	. Q	V	.	.
19.083	199.4840	152.82	.	.	. Q	V	.	.
19.167	200.4963	147.00	.	.	. Q	V	.	.
19.250	201.4716	141.60	.	.	. Q	V	.	.
19.333	202.4123	136.60	.	.	. Q	V	.	.
19.417	203.3211	131.96	.	.	. Q	V	.	.
19.500	204.2002	127.65	.	.	. Q	V	.	.
19.583	205.0517	123.63	.	.	. Q	V	.	.
19.667	205.8774	119.90	.	.	. Q	V	.	.
19.750	206.6792	116.41	.	.	. Q	V	.	.
19.833	207.4586	113.16	.	.	. Q	V	.	.
19.917	208.2170	110.12	.	.	. Q	V	.	.
20.000	208.9558	107.28	.	.	. Q	V	.	.
20.083	209.6762	104.61	.	.	. Q	V	.	.
20.167	210.3794	102.10	.	.	. Q	V	.	.
20.250	211.0664	99.75	.	.	. Q	V	.	.
20.333	211.7381	97.53	.	.	. Q	V	.	.
20.417	212.3954	95.44	.	.	. Q	V	.	.
20.500	213.0391	93.47	.	.	. Q	V	.	.
20.583	213.6700	91.61	.	.	. Q	V	.	.
20.667	214.2888	89.84	.	.	. Q	V	.	.
20.750	214.8960	88.17	.	.	. Q	V	.	.

20.833	215.4924	86.58	. Q	.	.	.	V	.
20.917	216.0783	85.08	. Q	.	.	.	V	.
21.000	216.6543	83.64	. Q	.	.	.	V	.
21.083	217.2210	82.28	. Q	.	.	.	V	.
21.167	217.7786	80.97	. Q	.	.	.	V	.
21.250	218.3277	79.73	. Q	.	.	.	V	.
21.333	218.8686	78.54	. Q	.	.	.	V	.
21.417	219.4016	77.40	. Q	.	.	.	V	.
21.500	219.9271	76.30	. Q	.	.	.	V	.
21.583	220.4454	75.25	. Q	.	.	.	V	.
21.667	220.9567	74.25	. Q	.	.	.	V	.
21.750	221.4614	73.28	. Q	.	.	.	V	.
21.833	221.9596	72.35	. Q	.	.	.	V	.
21.917	222.4517	71.45	. Q	.	.	.	V	.
22.000	222.9378	70.58	. Q	.	.	.	V	.
22.083	223.4182	69.75	. Q	.	.	.	V	.
22.167	223.8929	68.94	. Q	.	.	.	V	.
22.250	224.3624	68.16	. Q	.	.	.	V	.
22.333	224.8266	67.40	. Q	.	.	.	V	.
22.417	225.2858	66.67	. Q	.	.	.	V	.
22.500	225.7400	65.96	. Q	.	.	.	V	.
22.583	226.1896	65.28	. Q	.	.	.	V	.
22.667	226.6346	64.61	. Q	.	.	.	V	.
22.750	227.0750	63.96	. Q	.	.	.	V	.
22.833	227.5112	63.33	. Q	.	.	.	V	.
22.917	227.9431	62.72	. Q	.	.	.	V	.
23.000	228.3714	62.18	. Q	.	.	.	V	.
23.083	228.7973	61.85	. Q	.	.	.	V	.
23.167	229.2220	61.66	. Q	.	.	.	V	.
23.250	229.6452	61.46	. Q	.	.	.	V	.
23.333	230.0671	61.25	. Q	.	.	.	V	.
23.417	230.4874	61.03	. Q	.	.	.	V	.
23.500	230.9062	60.81	. Q	.	.	.	V	.
23.583	231.3235	60.58	. Q	.	.	.	V	.
23.667	231.7391	60.35	. Q	.	.	.	V	.
23.750	232.1530	60.11	. Q	.	.	.	V	.
23.833	232.5653	59.86	. Q	.	.	.	V	.
23.917	232.9759	59.61	. Q	.	.	.	V	.
24.000	233.3847	59.36	. Q	.	.	.	V	.
24.083	233.7917	59.09	. Q	.	.	.	V	.
24.167	234.1961	58.72	. Q	.	.	.	V	.
24.250	234.5964	58.13	. Q	.	.	.	V	.
24.333	234.9904	57.20	. Q	.	.	.	V	.
24.417	235.3754	55.90	. Q	.	.	.	V	.
24.500	235.7496	54.34	. Q	.	.	.	V	.
24.583	236.1122	52.65	. Q	.	.	.	V	.
24.667	236.4629	50.92	. Q	.	.	.	V	.
24.750	236.8017	49.20	.Q	.	.	.	V	.
24.833	237.1289	47.51	.Q	.	.	.	V	.
24.917	237.4448	45.87	.Q	.	.	.	V	.
25.000	237.7498	44.28	.Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
 (Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
---	-----------------------

Percentile	Duration (minutes)
0%	1505.0
10%	490.0
20%	245.0
30%	135.0
40%	90.0
50%	75.0
60%	60.0
70%	45.0
80%	40.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

Analysis prepared by:

***** DESCRIPTION OF STUDY *****
* RMV PA-3 BODR 2022 - SUBWATERSHED C *
* UNIT HYDROGRAPH - COMPLEX MODEL - SINGLE BASIN *
* 50-YR EV APRIL 2023 ROKAMOTO *

FILE NAME: 3C50EVC.DAT
TIME/DATE OF STUDY: 12:26 04/29/2023

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<

(UNIT-HYDROGRAPH ADDED TO STREAM #1)

WATERSHED AREA = 712.600 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.295 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY(DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.100
LOW LOSS FRACTION = 0.252
HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.37
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.80
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.06
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.78
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.47
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.12

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 28.249

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.736	149.620
2	9.629	680.214
3	26.094	1418.926
4	48.098	1896.317
5	70.345	1917.216
6	84.388	1210.230
7	91.977	654.030
8	96.067	352.475
9	98.010	167.489
10	98.626	53.040
11	99.155	45.642
12	99.662	43.684
13	99.916	21.842
14	100.000	7.281

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 51.9126
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 192.0123

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	300.0	600.0	900.0	1200.0
0.083	0.0041	0.59	Q	.	.	.	.
0.167	0.0267	3.28	Q	.	.	.	.
0.250	0.0880	8.91	Q	.	.	.	.
0.333	0.2012	16.44	Q	.	.	.	.
0.417	0.3670	24.07	Q	.	.	.	.
0.500	0.5663	28.94	Q	.	.	.	.
0.583	0.7841	31.62	VQ	.	.	.	.
0.667	1.0121	33.12	VQ	.	.	.	.
0.750	1.2455	33.89	VQ	.	.	.	.
0.833	1.4812	34.21	VQ	.	.	.	.
0.917	1.7189	34.51	VQ	.	.	.	.
1.000	1.9585	34.80	VQ	.	.	.	.
1.083	2.1996	35.01	VQ	.	.	.	.
1.167	2.4418	35.16	VQ	.	.	.	.
1.250	2.6848	35.28	VQ	.	.	.	.
1.333	2.9286	35.40	VQ	.	.	.	.
1.417	3.1732	35.53	VQ	.	.	.	.
1.500	3.4188	35.65	VQ	.	.	.	.
1.583	3.6652	35.78	VQ	.	.	.	.
1.667	3.9124	35.90	VQ	.	.	.	.
1.750	4.1606	36.03	VQ	.	.	.	.
1.833	4.4097	36.16	VQ	.	.	.	.
1.917	4.6596	36.30	VQ	.	.	.	.
2.000	4.9105	36.43	.Q	.	.	.	.
2.083	5.1623	36.56	.Q	.	.	.	.
2.167	5.4150	36.70	.Q	.	.	.	.
2.250	5.6687	36.83	.Q	.	.	.	.
2.333	5.9233	36.97	.Q	.	.	.	.
2.417	6.1789	37.11	.Q	.	.	.	.
2.500	6.4354	37.25	.Q	.	.	.	.
2.583	6.6929	37.39	.Q	.	.	.	.
2.667	6.9514	37.53	.Q	.	.	.	.
2.750	7.2109	37.68	.Q	.	.	.	.
2.833	7.4714	37.82	.Q	.	.	.	.
2.917	7.7329	37.97	.Q	.	.	.	.
3.000	7.9954	38.12	.Q	.	.	.	.
3.083	8.2590	38.27	.Q	.	.	.	.
3.167	8.5236	38.42	.Q	.	.	.	.
3.250	8.7892	38.57	.Q	.	.	.	.
3.333	9.0559	38.73	.Q	.	.	.	.
3.417	9.3238	38.89	.Q	.	.	.	.
3.500	9.5927	39.04	.Q	.	.	.	.
3.583	9.8627	39.20	.QV	.	.	.	.
3.667	10.1338	39.37	.QV	.	.	.	.
3.750	10.4060	39.53	.QV	.	.	.	.
3.833	10.6794	39.69	.QV	.	.	.	.
3.917	10.9539	39.86	.QV	.	.	.	.

4.000	11.2296	40.03	.QV	.	.	.	.
4.083	11.5065	40.20	.QV	.	.	.	.
4.167	11.7845	40.37	.QV	.	.	.	.
4.250	12.0638	40.55	.QV	.	.	.	.
4.333	12.3442	40.72	.QV	.	.	.	.
4.417	12.6259	40.90	.QV	.	.	.	.
4.500	12.9089	41.08	.QV	.	.	.	.
4.583	13.1931	41.27	.QV	.	.	.	.
4.667	13.4785	41.45	.QV	.	.	.	.
4.750	13.7653	41.64	.QV	.	.	.	.
4.833	14.0533	41.82	.QV	.	.	.	.
4.917	14.3427	42.02	.QV	.	.	.	.
5.000	14.6334	42.21	.Q V	.	.	.	.
5.083	14.9254	42.41	.Q V	.	.	.	.
5.167	15.2189	42.60	.Q V	.	.	.	.
5.250	15.5137	42.81	.Q V	.	.	.	.
5.333	15.8099	43.01	.Q V	.	.	.	.
5.417	16.1075	43.21	.Q V	.	.	.	.
5.500	16.4065	43.42	.Q V	.	.	.	.
5.583	16.7070	43.63	.Q V	.	.	.	.
5.667	17.0090	43.84	.Q V	.	.	.	.
5.750	17.3124	44.06	.Q V	.	.	.	.
5.833	17.6174	44.28	.Q V	.	.	.	.
5.917	17.9239	44.50	.Q V	.	.	.	.
6.000	18.2319	44.73	.Q V	.	.	.	.
6.083	18.5415	44.95	.Q V	.	.	.	.
6.167	18.8527	45.18	.Q V	.	.	.	.
6.250	19.1655	45.42	.Q V	.	.	.	.
6.333	19.4799	45.66	.Q V	.	.	.	.
6.417	19.7960	45.90	.Q V	.	.	.	.
6.500	20.1138	46.14	.Q V	.	.	.	.
6.583	20.4333	46.39	.Q V	.	.	.	.
6.667	20.7545	46.64	.Q V	.	.	.	.
6.750	21.0774	46.89	.Q V	.	.	.	.
6.833	21.4021	47.15	.Q V	.	.	.	.
6.917	21.7286	47.41	.Q V	.	.	.	.
7.000	22.0569	47.67	.Q V	.	.	.	.
7.083	22.3871	47.94	.Q V	.	.	.	.
7.167	22.7192	48.21	.Q V	.	.	.	.
7.250	23.0531	48.49	.Q V	.	.	.	.
7.333	23.3890	48.77	.Q V	.	.	.	.
7.417	23.7269	49.06	.Q V	.	.	.	.
7.500	24.0667	49.35	.Q V	.	.	.	.
7.583	24.4086	49.64	.Q V	.	.	.	.
7.667	24.7525	49.94	.Q V	.	.	.	.
7.750	25.0985	50.24	.Q V	.	.	.	.
7.833	25.4467	50.55	.Q V	.	.	.	.
7.917	25.7970	50.86	.Q V	.	.	.	.
8.000	26.1494	51.18	.Q V	.	.	.	.
8.083	26.5042	51.50	.Q V	.	.	.	.
8.167	26.8611	51.83	.Q V	.	.	.	.
8.250	27.2204	52.17	.Q V	.	.	.	.
8.333	27.5820	52.51	.Q V	.	.	.	.
8.417	27.9460	52.85	.Q V	.	.	.	.
8.500	28.3124	53.20	.Q V	.	.	.	.
8.583	28.6813	53.56	.Q V	.	.	.	.
8.667	29.0527	53.92	.Q V	.	.	.	.
8.750	29.4266	54.30	.Q V	.	.	.	.

8.833	29.8031	54.67	.Q	V	.	.	.	.
8.917	30.1823	55.06	.Q	V	.	.	.	.
9.000	30.5641	55.44	.Q	V	.	.	.	.
9.083	30.9487	55.84	.Q	V	.	.	.	.
9.167	31.3361	56.25	.Q	V	.	.	.	.
9.250	31.7264	56.66	.Q	V	.	.	.	.
9.333	32.1195	57.08	.Q	V	.	.	.	.
9.417	32.5156	57.51	.Q	V	.	.	.	.
9.500	32.9147	57.95	.Q	V	.	.	.	.
9.583	33.3169	58.40	.Q	V	.	.	.	.
9.667	33.7222	58.85	.Q	V	.	.	.	.
9.750	34.1307	59.32	.Q	V	.	.	.	.
9.833	34.5425	59.79	.Q	V	.	.	.	.
9.917	34.9577	60.28	.Q	V	.	.	.	.
10.000	35.3762	60.77	.Q	V	.	.	.	.
10.083	35.7982	61.28	.Q	V	.	.	.	.
10.167	36.2238	61.79	.Q	V	.	.	.	.
10.250	36.6530	62.32	.Q	V	.	.	.	.
10.333	37.0860	62.86	.Q	V	.	.	.	.
10.417	37.5227	63.42	.Q	V	.	.	.	.
10.500	37.9633	63.98	.Q	V	.	.	.	.
10.583	38.4080	64.56	.Q	V	.	.	.	.
10.667	38.8566	65.15	.Q	V	.	.	.	.
10.750	39.3095	65.76	.Q	V	.	.	.	.
10.833	39.7666	66.37	.Q	V	.	.	.	.
10.917	40.2281	67.01	.Q	V	.	.	.	.
11.000	40.6941	67.66	.Q	V	.	.	.	.
11.083	41.1648	68.34	.Q	V	.	.	.	.
11.167	41.6401	69.02	.Q	V	.	.	.	.
11.250	42.1203	69.73	.Q	V	.	.	.	.
11.333	42.6055	70.45	.Q	V	.	.	.	.
11.417	43.0958	71.19	.Q	V	.	.	.	.
11.500	43.5913	71.95	.Q	V	.	.	.	.
11.583	44.0923	72.74	.Q	V	.	.	.	.
11.667	44.5988	73.55	.Q	V	.	.	.	.
11.750	45.1111	74.38	.Q	V	.	.	.	.
11.833	45.6292	75.23	.Q	V	.	.	.	.
11.917	46.1535	76.12	.Q	V	.	.	.	.
12.000	46.6840	77.03	.Q	V	.	.	.	.
12.083	47.2238	78.39	.Q	V	.	.	.	.
12.167	47.7833	81.24	.Q	V	.	.	.	.
12.250	48.3769	86.19	.Q	V	.	.	.	.
12.333	49.0140	92.51	.Q	V	.	.	.	.
12.417	49.6955	98.94	.Q	V	.	.	.	.
12.500	50.4079	103.45	.Q	V	.	.	.	.
12.583	51.1413	106.49	.Q	V	.	.	.	.
12.667	51.8900	108.71	.Q	V	.	.	.	.
12.750	52.6510	110.49	.Q	V	.	.	.	.
12.833	53.4222	111.98	.Q	.V	.	.	.	.
12.917	54.2040	113.52	.Q	.V	.	.	.	.
13.000	54.9966	115.09	.Q	.V	.	.	.	.
13.083	55.8001	116.67	.Q	.V	.	.	.	.
13.167	56.6146	118.25	.Q	.V	.	.	.	.
13.250	57.4403	119.89	.Q	.V	.	.	.	.
13.333	58.2777	121.59	.Q	.V	.	.	.	.
13.417	59.1273	123.37	.Q	.V	.	.	.	.
13.500	59.9897	125.22	.Q	.V	.	.	.	.
13.583	60.8655	127.17	.Q	.V	.	.	.	.

13.667	61.7552	129.18	.Q	.V	.	.	.	.
13.750	62.6597	131.32	.Q	.V	.	.	.	.
13.833	63.5794	133.54	.Q	.V	.	.	.	.
13.917	64.5153	135.90	.Q	.V	.	.	.	.
14.000	65.4682	138.36	.Q	.V	.	.	.	.
14.083	66.4406	141.20	.Q	.V	.	.	.	.
14.167	67.4387	144.92	.Q	.V	.	.	.	.
14.250	68.4710	149.89	.Q	.V	.	.	.	.
14.333	69.5432	155.69	.Q	.V	.	.	.	.
14.417	70.6572	161.76	.Q	.V	.	.	.	.
14.500	71.8073	166.99	.Q	.V	.	.	.	.
14.583	72.9900	171.72	.Q	.V	.	.	.	.
14.667	74.2037	176.24	.Q	.V	.	.	.	.
14.750	75.4493	180.85	.Q	.V	.	.	.	.
14.833	76.7275	185.60	.Q	.V	.	.	.	.
14.917	78.0416	190.80	.Q	.V	.	.	.	.
15.000	79.3947	196.47	.Q	.V	.	.	.	.
15.083	80.7922	202.92	.Q	.V	.	.	.	.
15.167	82.2412	210.39	.Q	.V	.	.	.	.
15.250	83.7517	219.33	.Q	.V	.	.	.	.
15.333	85.3347	229.85	.Q	.V	.	.	.	.
15.417	86.9936	240.87	.Q	.V	.	.	.	.
15.500	88.7073	248.82	.Q	.V	.	.	.	.
15.583	90.4460	252.46	.Q	.V	.	.	.	.
15.667	92.1996	254.62	.Q	.V	.	.	.	.
15.750	94.0015	261.64	.Q	.V	.	.	.	.
15.833	95.9526	283.30	.Q	.V	.	.	.	.
15.917	98.1846	324.08	.Q	.V	.	.	.	.
16.000	100.8771	390.96	.Q	.V	.	.	.	.
16.083	104.5036	526.56	.Q	.V	.	.	.	.
16.167	109.7786	765.93	.Q	.V	.	.	.	.
16.250	116.8413	1025.51	.Q	.V	.	.	.	.
16.333	124.7581	1149.52	.Q	.V	.	.	.	.
16.417	132.2128	1082.42	.Q	.V	.	.	.	.
16.500	137.7413	802.74	.Q	.V	.	.	.	.
16.583	141.6693	570.34	.Q	.V	.	.	.	.
16.667	144.6122	427.31	.Q	.V	.	.	.	.
16.750	146.9274	336.16	.Q	.V	.	.	.	.
16.833	148.8249	275.52	.Q	.V	.	.	.	.
16.917	150.5425	249.40	.Q	.V	.	.	.	.
17.000	152.1233	229.54	.Q	.V	.	.	.	.
17.083	153.5536	207.68	.Q	.V	.	.	.	.
17.167	154.8593	189.58	.Q	.V	.	.	.	.
17.250	156.0662	175.25	.Q	.V	.	.	.	.
17.333	157.1969	164.17	.Q	.V	.	.	.	.
17.417	158.2596	154.30	.Q	.V	.	.	.	.
17.500	159.2671	146.29	.Q	.V	.	.	.	.
17.583	160.2299	139.79	.Q	.V	.	.	.	.
17.667	161.1551	134.34	.Q	.V	.	.	.	.
17.750	162.0480	129.65	.Q	.V	.	.	.	.
17.833	162.9126	125.55	.Q	.V	.	.	.	.
17.917	163.7515	121.81	.Q	.V	.	.	.	.
18.000	164.5668	118.37	.Q	.V	.	.	.	.
18.083	165.3575	114.81	.Q	.V	.	.	.	.
18.167	166.1153	110.04	.Q	.V	.	.	.	.
18.250	166.8278	103.44	.Q	.V	.	.	.	.
18.333	167.4870	95.73	.Q	.V	.	.	.	.
18.417	168.0941	88.15	.Q	.V	.	.	.	.

18.500	168.6637	82.71	. Q	.	.	.	V	.
18.583	169.2075	78.95	. Q	.	.	.	V	.
18.667	169.7321	76.17	. Q	.	.	.	V	.
18.750	170.2417	74.00	. Q	.	.	.	V	.
18.833	170.7394	72.26	. Q	.	.	.	V	.
18.917	171.2257	70.62	. Q	.	.	.	V	.
19.000	171.7014	69.06	. Q	.	.	.	V	.
19.083	172.1672	67.65	. Q	.	.	.	V	.
19.167	172.6241	66.34	. Q	.	.	.	V	.
19.250	173.0725	65.11	. Q	.	.	.	V	.
19.333	173.5128	63.94	. Q	.	.	.	V	.
19.417	173.9455	62.82	. Q	.	.	.	V	.
19.500	174.3708	61.75	. Q	.	.	.	V	.
19.583	174.7890	60.73	. Q	.	.	.	V	.
19.667	175.2006	59.75	.Q	.	.	.	V	.
19.750	175.6056	58.81	.Q	.	.	.	V	.
19.833	176.0044	57.91	.Q	.	.	.	V	.
19.917	176.3973	57.04	.Q	.	.	.	V	.
20.000	176.7844	56.21	.Q	.	.	.	V	.
20.083	177.1660	55.41	.Q	.	.	.	V	.
20.167	177.5422	54.63	.Q	.	.	.	V	.
20.250	177.9133	53.88	.Q	.	.	.	V	.
20.333	178.2795	53.16	.Q	.	.	.	V	.
20.417	178.6408	52.47	.Q	.	.	.	V	.
20.500	178.9976	51.80	.Q	.	.	.	V	.
20.583	179.3498	51.14	.Q	.	.	.	V	.
20.667	179.6977	50.51	.Q	.	.	.	V	.
20.750	180.0414	49.90	.Q	.	.	.	V	.
20.833	180.3810	49.31	.Q	.	.	.	V	.
20.917	180.7166	48.74	.Q	.	.	.	V	.
21.000	181.0485	48.18	.Q	.	.	.	V	.
21.083	181.3766	47.64	.Q	.	.	.	V	.
21.167	181.7010	47.11	.Q	.	.	.	V	.
21.250	182.0220	46.60	.Q	.	.	.	V	.
21.333	182.3395	46.11	.Q	.	.	.	V	.
21.417	182.6537	45.62	.Q	.	.	.	V	.
21.500	182.9647	45.15	.Q	.	.	.	V	.
21.583	183.2725	44.70	.Q	.	.	.	V	.
21.667	183.5773	44.25	.Q	.	.	.	V	.
21.750	183.8790	43.81	.Q	.	.	.	V	.
21.833	184.1779	43.39	.Q	.	.	.	V	.
21.917	184.4739	42.98	.Q	.	.	.	V	.
22.000	184.7671	42.57	.Q	.	.	.	V	.
22.083	185.0576	42.18	.Q	.	.	.	V	.
22.167	185.3454	41.80	.Q	.	.	.	V	.
22.250	185.6307	41.42	.Q	.	.	.	V	.
22.333	185.9135	41.06	.Q	.	.	.	V	.
22.417	186.1937	40.70	.Q	.	.	.	V	.
22.500	186.4716	40.35	.Q	.	.	.	V	.
22.583	186.7471	40.00	.Q	.	.	.	V	.
22.667	187.0203	39.67	.Q	.	.	.	V	.
22.750	187.2912	39.34	.Q	.	.	.	V	.
22.833	187.5600	39.02	.Q	.	.	.	V	.
22.917	187.8265	38.70	.Q	.	.	.	V	.
23.000	188.0910	38.40	.Q	.	.	.	V	.
23.083	188.3533	38.09	.Q	.	.	.	V	.
23.167	188.6136	37.80	.Q	.	.	.	V	.
23.250	188.8720	37.51	.Q	.	.	.	V	.

23.333	189.1284	37.23	.Q	.	.	.	V	.
23.417	189.3828	36.95	.Q	.	.	.	V	.
23.500	189.6354	36.67	.Q	.	.	.	V	.
23.583	189.8861	36.41	.Q	.	.	.	V	.
23.667	190.1350	36.14	.Q	.	.	.	V	.
23.750	190.3822	35.89	.Q	.	.	.	V	.
23.833	190.6276	35.63	.Q	.	.	.	V	.
23.917	190.8713	35.38	.Q	.	.	.	V	.
24.000	191.1133	35.14	.Q	.	.	.	V	.
24.083	191.3495	34.31	.Q	.	.	.	V	.
24.167	191.5657	31.39	.Q	.	.	.	V	.
24.250	191.7419	25.58	Q	.	.	.	V	.
24.333	191.8653	17.92	Q	.	.	.	V	.
24.417	191.9358	10.23	Q	.	.	.	V	.
24.500	191.9729	5.39	Q	.	.	.	V	.
24.583	191.9919	2.77	Q	.	.	.	V	.
24.667	192.0013	1.36	Q	.	.	.	V	.
24.750	192.0060	0.69	Q	.	.	.	V	.
24.833	192.0093	0.47	Q	.	.	.	V	.
24.917	192.0113	0.29	Q	.	.	.	V	.
25.000	192.0121	0.12	Q	.	.	.	V	.
25.083	192.0123	0.03	Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1505.0
10%	305.0
20%	95.0
30%	45.0
40%	35.0
50%	25.0
60%	25.0
70%	15.0
80%	15.0
90%	10.0

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

>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
=====

(UNIT-HYDROGRAPH ADDED TO STREAM #2)

WATERSHED AREA = 462.500 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.251 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.135

LOW LOSS FRACTION = 0.326
 HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL(INCH)= 0.37
 SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)= 0.80
 SPECIFIED PEAK 1-HOUR RAINFALL(INCH) = 1.06
 SPECIFIED PEAK 3-HOUR RAINFALL(INCH) = 1.78
 SPECIFIED PEAK 6-HOUR RAINFALL(INCH) = 2.47
 SPECIFIED PEAK 24-HOUR RAINFALL(INCH) = 4.12

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
 30-MINUTE FACTOR = 0.942
 1-HOUR FACTOR = 0.942
 3-HOUR FACTOR = 0.991
 6-HOUR FACTOR = 0.996
 24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
 UNIT INTERVAL PERCENTAGE OF LAG-TIME = 33.201

UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	2.157	120.668
2	13.480	633.309
3	35.148	1211.978
4	62.388	1523.611
5	81.967	1095.145
6	91.736	546.417
7	96.417	261.813
8	98.257	102.900
9	98.885	35.159
10	99.429	30.432
11	99.772	19.157
12	99.943	9.579
13	100.000	3.193

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 43.9470
 TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 114.3733

24 - HOUR STORM
 RUNOFF HYDROGRAPH

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q (CFS)	0.	225.0	450.0	675.0	900.0
0.083	0.0030	0.43	Q	.	.	.	.
0.167	0.0215	2.69	Q	.	.	.	.
0.250	0.0698	7.02	Q	.	.	.	.
0.333	0.1557	12.47	Q	.	.	.	.
0.417	0.2687	16.41	Q	.	.	.	.
0.500	0.3955	18.41	Q	.	.	.	.
0.583	0.5292	19.41	Q	.	.	.	.
0.667	0.6658	19.84	Q	.	.	.	.
0.750	0.8038	20.03	Q	.	.	.	.
0.833	0.9429	20.21	Q	.	.	.	.
0.917	1.0830	20.34	Q	.	.	.	.
1.000	1.2238	20.45	Q	.	.	.	.
1.083	1.3652	20.53	Q	.	.	.	.
1.167	1.5071	20.60	Q	.	.	.	.
1.250	1.6495	20.67	Q	.	.	.	.
1.333	1.7923	20.74	Q	.	.	.	.
1.417	1.9357	20.82	Q	.	.	.	.
1.500	2.0796	20.89	Q	.	.	.	.
1.583	2.2240	20.96	Q	.	.	.	.
1.667	2.3689	21.04	Q	.	.	.	.
1.750	2.5143	21.12	Q	.	.	.	.
1.833	2.6602	21.19	Q	.	.	.	.
1.917	2.8067	21.27	Q	.	.	.	.
2.000	2.9537	21.35	QV	.	.	.	.
2.083	3.1013	21.42	QV	.	.	.	.
2.167	3.2494	21.50	QV	.	.	.	.
2.250	3.3981	21.58	QV	.	.	.	.
2.333	3.5473	21.67	QV	.	.	.	.
2.417	3.6970	21.75	QV	.	.	.	.
2.500	3.8474	21.83	QV	.	.	.	.
2.583	3.9983	21.91	QV	.	.	.	.
2.667	4.1498	22.00	QV	.	.	.	.
2.750	4.3019	22.08	QV	.	.	.	.
2.833	4.4545	22.17	QV	.	.	.	.
2.917	4.6078	22.25	QV	.	.	.	.
3.000	4.7617	22.34	QV	.	.	.	.
3.083	4.9161	22.43	QV	.	.	.	.
3.167	5.0712	22.52	.Q	.	.	.	.
3.250	5.2269	22.61	.Q	.	.	.	.
3.333	5.3833	22.70	.Q	.	.	.	.
3.417	5.5402	22.79	.Q	.	.	.	.
3.500	5.6978	22.89	.Q	.	.	.	.
3.583	5.8561	22.98	.QV	.	.	.	.
3.667	6.0150	23.08	.QV	.	.	.	.
3.750	6.1746	23.17	.QV	.	.	.	.
3.833	6.3349	23.27	.QV	.	.	.	.
3.917	6.4958	23.37	.QV	.	.	.	.

4.000	6.6574	23.47	.QV	.	.	.	.
4.083	6.8197	23.57	.QV	.	.	.	.
4.167	6.9827	23.67	.QV	.	.	.	.
4.250	7.1464	23.77	.QV	.	.	.	.
4.333	7.3108	23.87	.QV	.	.	.	.
4.417	7.4759	23.98	.QV	.	.	.	.
4.500	7.6418	24.09	.QV	.	.	.	.
4.583	7.8084	24.19	.QV	.	.	.	.
4.667	7.9758	24.30	.QV	.	.	.	.
4.750	8.1439	24.41	.QV	.	.	.	.
4.833	8.3128	24.52	.QV	.	.	.	.
4.917	8.4825	24.63	.QV	.	.	.	.
5.000	8.6529	24.75	.Q V	.	.	.	.
5.083	8.8241	24.86	.Q V	.	.	.	.
5.167	8.9962	24.98	.Q V	.	.	.	.
5.250	9.1690	25.10	.Q V	.	.	.	.
5.333	9.3427	25.22	.Q V	.	.	.	.
5.417	9.5172	25.34	.Q V	.	.	.	.
5.500	9.6926	25.46	.Q V	.	.	.	.
5.583	9.8688	25.59	.Q V	.	.	.	.
5.667	10.0459	25.71	.Q V	.	.	.	.
5.750	10.2238	25.84	.Q V	.	.	.	.
5.833	10.4027	25.97	.Q V	.	.	.	.
5.917	10.5824	26.10	.Q V	.	.	.	.
6.000	10.7631	26.23	.Q V	.	.	.	.
6.083	10.9446	26.36	.Q V	.	.	.	.
6.167	11.1272	26.50	.Q V	.	.	.	.
6.250	11.3106	26.64	.Q V	.	.	.	.
6.333	11.4950	26.78	.Q V	.	.	.	.
6.417	11.6804	26.92	.Q V	.	.	.	.
6.500	11.8668	27.06	.Q V	.	.	.	.
6.583	12.0542	27.21	.Q V	.	.	.	.
6.667	12.2426	27.36	.Q V	.	.	.	.
6.750	12.4320	27.50	.Q V	.	.	.	.
6.833	12.6225	27.66	.Q V	.	.	.	.
6.917	12.8140	27.81	.Q V	.	.	.	.
7.000	13.0066	27.97	.Q V	.	.	.	.
7.083	13.2003	28.12	.Q V	.	.	.	.
7.167	13.3951	28.29	.Q V	.	.	.	.
7.250	13.5911	28.45	.Q V	.	.	.	.
7.333	13.7881	28.61	.Q V	.	.	.	.
7.417	13.9864	28.78	.Q V	.	.	.	.
7.500	14.1858	28.95	.Q V	.	.	.	.
7.583	14.3864	29.13	.Q V	.	.	.	.
7.667	14.5882	29.30	.Q V	.	.	.	.
7.750	14.7912	29.48	.Q V	.	.	.	.
7.833	14.9955	29.66	.Q V	.	.	.	.
7.917	15.2011	29.85	.Q V	.	.	.	.
8.000	15.4079	30.04	.Q V	.	.	.	.
8.083	15.6161	30.23	.Q V	.	.	.	.
8.167	15.8256	30.42	.Q V	.	.	.	.
8.250	16.0365	30.62	.Q V	.	.	.	.
8.333	16.2487	30.82	.Q V	.	.	.	.
8.417	16.4623	31.02	.Q V	.	.	.	.
8.500	16.6774	31.23	.Q V	.	.	.	.
8.583	16.8939	31.44	.Q V	.	.	.	.
8.667	17.1120	31.66	.Q V	.	.	.	.
8.750	17.3315	31.87	.Q V	.	.	.	.

8.833	17.5525	32.10	.Q	V	.	.	.
8.917	17.7751	32.32	.Q	V	.	.	.
9.000	17.9993	32.55	.Q	V	.	.	.
9.083	18.2251	32.79	.Q	V	.	.	.
9.167	18.4526	33.03	.Q	V	.	.	.
9.250	18.6818	33.27	.Q	V	.	.	.
9.333	18.9126	33.52	.Q	V	.	.	.
9.417	19.1452	33.77	.Q	V	.	.	.
9.500	19.3796	34.03	.Q	V	.	.	.
9.583	19.6158	34.30	.Q	V	.	.	.
9.667	19.8539	34.57	.Q	V	.	.	.
9.750	20.0939	34.84	.Q	V	.	.	.
9.833	20.3358	35.12	.Q	V	.	.	.
9.917	20.5796	35.41	.Q	V	.	.	.
10.000	20.8255	35.70	.Q	V	.	.	.
10.083	21.0734	36.00	.Q	V	.	.	.
10.167	21.3235	36.31	.Q	V	.	.	.
10.250	21.5757	36.62	.Q	V	.	.	.
10.333	21.8301	36.94	.Q	V	.	.	.
10.417	22.0868	37.27	.Q	V	.	.	.
10.500	22.3457	37.60	.Q	V	.	.	.
10.583	22.6070	37.94	.Q	V	.	.	.
10.667	22.8708	38.29	.Q	V	.	.	.
10.750	23.1370	38.65	.Q	V	.	.	.
10.833	23.4057	39.02	.Q	V	.	.	.
10.917	23.6770	39.40	.Q	V	.	.	.
11.000	23.9510	39.79	.Q	V	.	.	.
11.083	24.2278	40.18	.Q	V	.	.	.
11.167	24.5073	40.59	.Q	V	.	.	.
11.250	24.7897	41.00	.Q	V	.	.	.
11.333	25.0751	41.44	.Q	V	.	.	.
11.417	25.3635	41.87	.Q	V	.	.	.
11.500	25.6550	42.33	.Q	V	.	.	.
11.583	25.9497	42.79	.Q	V	.	.	.
11.667	26.2478	43.28	.Q	V	.	.	.
11.750	26.5492	43.77	.Q	V	.	.	.
11.833	26.8542	44.28	.Q	V	.	.	.
11.917	27.1628	44.80	.Q	V	.	.	.
12.000	27.4751	45.35	.Q	V	.	.	.
12.083	27.7933	46.20	.Q	V	.	.	.
12.167	28.1264	48.37	.Q	V	.	.	.
12.250	28.4845	52.00	.Q	V	.	.	.
12.333	28.8733	56.45	.Q	V	.	.	.
12.417	29.2854	59.85	.Q	V	.	.	.
12.500	29.7118	61.91	.Q	V	.	.	.
12.583	30.1477	63.29	.Q	V	.	.	.
12.667	30.5905	64.30	.Q	V	.	.	.
12.750	31.0393	65.16	.Q	V	.	.	.
12.833	31.4941	66.05	.Q	.V	.	.	.
12.917	31.9551	66.93	.Q	.V	.	.	.
13.000	32.4222	67.82	.Q	.V	.	.	.
13.083	32.8955	68.73	.Q	.V	.	.	.
13.167	33.3754	69.67	.Q	.V	.	.	.
13.250	33.8619	70.64	.Q	.V	.	.	.
13.333	34.3555	71.67	.Q	.V	.	.	.
13.417	34.8563	72.72	.Q	.V	.	.	.
13.500	35.3649	73.84	.Q	.V	.	.	.
13.583	35.8814	74.99	.Q	.V	.	.	.

13.667	36.4063	76.22	. Q	. V	.	.	.
13.750	36.9399	77.48	. Q	. V	.	.	.
13.833	37.4829	78.83	. Q	. V	.	.	.
13.917	38.0354	80.23	. Q	. V	.	.	.
14.000	38.5983	81.73	. Q	. V	.	.	.
14.083	39.1730	83.45	. Q	. V	.	.	.
14.167	39.7648	85.94	. Q	. V	.	.	.
14.250	40.3795	89.25	. Q	. V	.	.	.
14.333	41.0207	93.10	. Q	. V	.	.	.
14.417	41.6853	96.50	. Q	. V	.	.	.
14.500	42.3696	99.35	. Q	. V	.	.	.
14.583	43.0717	101.95	. Q	. V	.	.	.
14.667	43.7918	104.56	. Q	. V	.	.	.
14.750	44.5303	107.23	. Q	. V	.	.	.
14.833	45.2888	110.15	. Q	. V	.	.	.
14.917	46.0689	113.26	. Q	. V	.	.	.
15.000	46.8726	116.70	. Q	. V	.	.	.
15.083	47.7023	120.47	. Q	. V	.	.	.
15.167	48.5630	124.98	. Q	. V	.	.	.
15.250	49.4614	130.44	. Q	. V	.	.	.
15.333	50.4073	137.35	. Q	. V	.	.	.
15.417	51.4022	144.47	. Q	. V	.	.	.
15.500	52.4250	148.51	. Q	. V	.	.	.
15.583	53.4499	148.81	. Q	. V	.	.	.
15.667	54.4740	148.71	. Q	. V	.	.	.
15.750	55.5488	156.05	. Q	. V	.	.	.
15.833	56.7572	175.47	. Q	. V	.	.	.
15.917	58.1880	207.75	. Q	. V	.	.	.
16.000	59.9858	261.04	. Q	. V	.	.	.
16.083	62.5116	366.75	.	. Q	. V	.	.
16.167	66.4423	570.73	.	.	. V	. Q	.
16.250	71.6290	753.12	.	.	. V	. Q	.
16.333	77.1483	801.40	.	.	. V	. Q	.
16.417	81.4234	620.74	.	.	. Q	. V	.
16.500	84.2276	407.18	.	. Q	.	. V	.
16.583	86.1554	279.91	.	. Q	.	. V	.
16.667	87.5813	207.05	. Q	.	.	. V	.
16.750	88.7434	168.74	. Q	.	.	. V	.
16.833	89.7842	151.12	. Q	.	.	. V	.
16.917	90.7181	135.61	. Q	.	.	. V	.
17.000	91.5653	123.01	. Q	.	.	. V	.
17.083	92.3444	113.13	. Q	.	.	. V	.
17.167	93.0693	105.25	. Q	.	.	. V	.
17.250	93.7481	98.56	. Q	.	.	. V	.
17.333	94.3833	92.23	. Q	.	.	. V	.
17.417	94.9825	87.01	. Q	.	.	. V	.
17.500	95.5537	82.93	. Q	.	.	. V	.
17.583	96.1019	79.60	. Q	.	.	. V	.
17.667	96.6307	76.78	. Q	.	.	. V	.
17.750	97.1424	74.30	. Q	.	.	. V	.
17.833	97.6385	72.04	. Q	.	.	. V	.
17.917	98.1205	69.98	. Q	.	.	. V	.
18.000	98.5895	68.10	. Q	.	.	. V	.
18.083	99.0444	66.06	. Q	.	.	. V	.
18.167	99.4774	62.87	. Q	.	.	. V	.
18.250	99.8793	58.35	. Q	.	.	. V	.
18.333	100.2455	53.18	. Q	.	.	. V	.
18.417	100.5843	49.18	. Q	.	.	. V	.

18.500	100.9056	46.66	. Q	.	.	.	. V	.
18.583	101.2149	44.92	. Q	.	.	.	. V	.
18.667	101.5155	43.64	. Q	.	.	.	. V	.
18.750	101.8089	42.60	. Q	.	.	.	. V	.
18.833	102.0955	41.62	. Q	.	.	.	. V	.
18.917	102.3759	40.72	. Q	.	.	.	. V	.
19.000	102.6506	39.88	. Q	.	.	.	. V	.
19.083	102.9199	39.10	. Q	.	.	.	. V	.
19.167	103.1842	38.37	. Q	.	.	.	. V	.
19.250	103.4436	37.67	. Q	.	.	.	. V	.
19.333	103.6985	37.01	. Q	.	.	.	. V	.
19.417	103.9490	36.37	. Q	.	.	.	. V	.
19.500	104.1953	35.76	. Q	.	.	.	. V	.
19.583	104.4376	35.18	. Q	.	.	.	. V	.
19.667	104.6760	34.62	. Q	.	.	.	. V	.
19.750	104.9108	34.09	. Q	.	.	.	. V	.
19.833	105.1420	33.57	. Q	.	.	.	. V	.
19.917	105.3698	33.08	. Q	.	.	.	. V	.
20.000	105.5943	32.60	. Q	.	.	.	. V	.
20.083	105.8157	32.14	. Q	.	.	.	. V	.
20.167	106.0340	31.70	. Q	.	.	.	. V	.
20.250	106.2493	31.27	. Q	.	.	.	. V	.
20.333	106.4618	30.86	. Q	.	.	.	. V	.
20.417	106.6716	30.46	. Q	.	.	.	. V	.
20.500	106.8787	30.07	. Q	.	.	.	. V	.
20.583	107.0832	29.70	. Q	.	.	.	. V	.
20.667	107.2852	29.34	. Q	.	.	.	. V	.
20.750	107.4848	28.98	. Q	.	.	.	. V	.
20.833	107.6821	28.64	. Q	.	.	.	. V	.
20.917	107.8771	28.31	. Q	.	.	.	. V	.
21.000	108.0699	27.99	. Q	.	.	.	. V	.
21.083	108.2606	27.68	. Q	.	.	.	. V	.
21.167	108.4492	27.38	. Q	.	.	.	. V	.
21.250	108.6357	27.09	. Q	.	.	.	. V	.
21.333	108.8203	26.80	. Q	.	.	.	. V	.
21.417	109.0030	26.52	. Q	.	.	.	. V	.
21.500	109.1838	26.25	. Q	.	.	.	. V	.
21.583	109.3628	25.99	. Q	.	.	.	. V	.
21.667	109.5400	25.73	. Q	.	.	.	. V	.
21.750	109.7155	25.48	. Q	.	.	.	. V	.
21.833	109.8893	25.24	. Q	.	.	.	. V	.
21.917	110.0614	25.00	. Q	.	.	.	. V	.
22.000	110.2320	24.77	. Q	.	.	.	. V	.
22.083	110.4010	24.54	. Q	.	.	.	. V	.
22.167	110.5685	24.32	. Q	.	.	.	. V	.
22.250	110.7345	24.10	. Q	.	.	.	. V	.
22.333	110.8990	23.89	. Q	.	.	.	. V	.
22.417	111.0621	23.68	. Q	.	.	.	. V	.
22.500	111.2238	23.48	. Q	.	.	.	. V	.
22.583	111.3842	23.28	. Q	.	.	.	. V	.
22.667	111.5432	23.09	. Q	.	.	.	. V	.
22.750	111.7009	22.90	. Q	.	.	.	. V	.
22.833	111.8573	22.71	. Q	.	.	.	. V	.
22.917	112.0125	22.53	. Q	.	.	.	. V	.
23.000	112.1665	22.35	. Q	.	.	.	. V	.
23.083	112.3192	22.18	. Q	.	.	.	. V	.
23.167	112.4708	22.01	. Q	.	.	.	. V	.
23.250	112.6212	21.84	. Q	.	.	.	. V	.

23.333	112.7705	21.68	Q	.	.	.	V.
23.417	112.9187	21.52	Q	.	.	.	V.
23.500	113.0658	21.36	Q	.	.	.	V.
23.583	113.2118	21.20	Q	.	.	.	V.
23.667	113.3568	21.05	Q	.	.	.	V.
23.750	113.5008	20.90	Q	.	.	.	V.
23.833	113.6437	20.76	Q	.	.	.	V.
23.917	113.7857	20.61	Q	.	.	.	V.
24.000	113.9266	20.47	Q	.	.	.	V.
24.083	114.0637	19.90	Q	.	.	.	V.
24.167	114.1843	17.52	Q	.	.	.	V.
24.250	114.2745	13.09	Q	.	.	.	V.
24.333	114.3267	7.58	Q	.	.	.	V.
24.417	114.3517	3.63	Q	.	.	.	V.
24.500	114.3632	1.67	Q	.	.	.	V.
24.583	114.3681	0.72	Q	.	.	.	V.
24.667	114.3706	0.35	Q	.	.	.	V.
24.750	114.3721	0.22	Q	.	.	.	V.
24.833	114.3729	0.11	Q	.	.	.	V.
24.917	114.3732	0.05	Q	.	.	.	V.
25.000	114.3733	0.01	Q	.	.	.	V.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
0%	1500.0
10%	220.0
20%	60.0
30%	40.0
40%	30.0
50%	25.0
60%	20.0
70%	20.0
80%	10.0
90%	10.0

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

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

WATERSHED AREA = 117.200 ACRES
BASEFLOW = 0.000 CFS/SQUARE-MILE
*USER ENTERED "LAG" TIME = 0.375 HOURS
CAUTION: LAG TIME IS LESS THAN 0.50 HOURS.
THE 5-MINUTE PERIOD UH MODEL (USED IN THIS COMPUTER PROGRAM)
MAY BE TOO LARGE FOR PEAK FLOW ESTIMATES.
VALLEY (DEVELOPED) S-GRAPH SELECTED
MAXIMUM WATERSHED LOSS RATE (INCH/HOUR) = 0.283
LOW LOSS FRACTION = 0.475

HYDROGRAPH MODEL #1 SPECIFIED

SPECIFIED PEAK 5-MINUTES RAINFALL (INCH) = 0.37
SPECIFIED PEAK 30-MINUTES RAINFALL (INCH) = 0.80
SPECIFIED PEAK 1-HOUR RAINFALL (INCH) = 1.06
SPECIFIED PEAK 3-HOUR RAINFALL (INCH) = 1.78
SPECIFIED PEAK 6-HOUR RAINFALL (INCH) = 2.47
SPECIFIED PEAK 24-HOUR RAINFALL (INCH) = 4.12

*USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:

5-MINUTE FACTOR = 0.942
30-MINUTE FACTOR = 0.942
1-HOUR FACTOR = 0.942
3-HOUR FACTOR = 0.991
6-HOUR FACTOR = 0.996
24-HOUR FACTOR = 0.997

UNIT HYDROGRAPH TIME UNIT = 5.000 MINUTES
UNIT INTERVAL PERCENTAGE OF LAG-TIME = 22.222

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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES (CFS)
1	1.300	18.423
2	5.779	63.494
3	16.563	152.848
4	30.955	203.982
5	49.167	258.143
6	67.100	254.175
7	79.974	182.472
8	88.154	115.953
9	93.005	68.749
10	96.028	42.848
11	97.749	24.403
12	98.385	9.014
13	98.802	5.906
14	99.219	5.905
15	99.635	5.905
16	100.000	5.168

TOTAL SOIL-LOSS VOLUME (ACRE-FEET) = 16.9485
TOTAL STORM RUNOFF VOLUME (ACRE-FEET) = 23.1737

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

HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS(CFS)

(Note: Time indicated is at END of Each Unit Intervals)

TIME(HRS)	VOLUME(AF)	Q(CFS)	0.	50.0	100.0	150.0	200.0
0.083	0.0004	0.05	Q	.	.	.	.
0.167	0.0019	0.23	Q	.	.	.	.
0.250	0.0064	0.65	Q	.	.	.	.
0.333	0.0148	1.22	Q	.	.	.	.
0.417	0.0282	1.94	Q	.	.	.	.
0.500	0.0465	2.65	Q	.	.	.	.
0.583	0.0683	3.17	Q	.	.	.	.
0.667	0.0924	3.50	Q	.	.	.	.
0.750	0.1179	3.70	Q	.	.	.	.
0.833	0.1443	3.83	Q	.	.	.	.
0.917	0.1713	3.92	Q	.	.	.	.
1.000	0.1985	3.95	Q	.	.	.	.
1.083	0.2260	3.98	Q	.	.	.	.
1.167	0.2536	4.01	Q	.	.	.	.
1.250	0.2814	4.04	Q	.	.	.	.
1.333	0.3095	4.07	Q	.	.	.	.
1.417	0.3376	4.09	Q	.	.	.	.
1.500	0.3659	4.10	Q	.	.	.	.
1.583	0.3942	4.12	Q	.	.	.	.
1.667	0.4227	4.13	Q	.	.	.	.
1.750	0.4512	4.14	Q	.	.	.	.
1.833	0.4799	4.16	Q	.	.	.	.
1.917	0.5086	4.17	Q	.	.	.	.
2.000	0.5375	4.19	Q	.	.	.	.
2.083	0.5664	4.20	Q	.	.	.	.
2.167	0.5955	4.22	QV	.	.	.	.
2.250	0.6247	4.24	QV	.	.	.	.
2.333	0.6539	4.25	QV	.	.	.	.
2.417	0.6833	4.27	QV	.	.	.	.
2.500	0.7128	4.28	QV	.	.	.	.
2.583	0.7424	4.30	QV	.	.	.	.
2.667	0.7722	4.32	QV	.	.	.	.
2.750	0.8020	4.33	QV	.	.	.	.
2.833	0.8320	4.35	QV	.	.	.	.
2.917	0.8620	4.37	QV	.	.	.	.
3.000	0.8922	4.38	QV	.	.	.	.
3.083	0.9225	4.40	QV	.	.	.	.
3.167	0.9529	4.42	QV	.	.	.	.
3.250	0.9835	4.44	QV	.	.	.	.
3.333	1.0141	4.45	QV	.	.	.	.
3.417	1.0449	4.47	QV	.	.	.	.
3.500	1.0758	4.49	QV	.	.	.	.
3.583	1.1069	4.51	QV	.	.	.	.
3.667	1.1381	4.53	QV	.	.	.	.
3.750	1.1693	4.54	Q V	.	.	.	.
3.833	1.2008	4.56	Q V	.	.	.	.
3.917	1.2323	4.58	Q V	.	.	.	.

4.000	1.2640	4.60	Q V	.	.	.	.
4.083	1.2958	4.62	Q V	.	.	.	.
4.167	1.3278	4.64	Q V	.	.	.	.
4.250	1.3599	4.66	Q V	.	.	.	.
4.333	1.3921	4.68	Q V	.	.	.	.
4.417	1.4245	4.70	Q V	.	.	.	.
4.500	1.4570	4.72	Q V	.	.	.	.
4.583	1.4897	4.74	Q V	.	.	.	.
4.667	1.5225	4.76	Q V	.	.	.	.
4.750	1.5554	4.78	Q V	.	.	.	.
4.833	1.5885	4.81	Q V	.	.	.	.
4.917	1.6218	4.83	Q V	.	.	.	.
5.000	1.6552	4.85	Q V	.	.	.	.
5.083	1.6887	4.87	Q V	.	.	.	.
5.167	1.7225	4.89	Q V	.	.	.	.
5.250	1.7563	4.92	Q V	.	.	.	.
5.333	1.7904	4.94	Q V	.	.	.	.
5.417	1.8245	4.96	Q V	.	.	.	.
5.500	1.8589	4.99	Q V	.	.	.	.
5.583	1.8934	5.01	.Q V	.	.	.	.
5.667	1.9281	5.04	.Q V	.	.	.	.
5.750	1.9630	5.06	.Q V	.	.	.	.
5.833	1.9980	5.09	.Q V	.	.	.	.
5.917	2.0332	5.11	.Q V	.	.	.	.
6.000	2.0686	5.14	.Q V	.	.	.	.
6.083	2.1041	5.16	.Q V	.	.	.	.
6.167	2.1399	5.19	.Q V	.	.	.	.
6.250	2.1758	5.22	.Q V	.	.	.	.
6.333	2.2119	5.24	.Q V	.	.	.	.
6.417	2.2482	5.27	.Q V	.	.	.	.
6.500	2.2847	5.30	.Q V	.	.	.	.
6.583	2.3214	5.33	.Q V	.	.	.	.
6.667	2.3582	5.35	.Q V	.	.	.	.
6.750	2.3953	5.38	.Q V	.	.	.	.
6.833	2.4326	5.41	.Q V	.	.	.	.
6.917	2.4701	5.44	.Q V	.	.	.	.
7.000	2.5078	5.47	.Q V	.	.	.	.
7.083	2.5457	5.50	.Q V	.	.	.	.
7.167	2.5838	5.53	.Q V	.	.	.	.
7.250	2.6221	5.57	.Q V	.	.	.	.
7.333	2.6607	5.60	.Q V	.	.	.	.
7.417	2.6994	5.63	.Q V	.	.	.	.
7.500	2.7384	5.66	.Q V	.	.	.	.
7.583	2.7777	5.70	.Q V	.	.	.	.
7.667	2.8171	5.73	.Q V	.	.	.	.
7.750	2.8568	5.76	.Q V	.	.	.	.
7.833	2.8968	5.80	.Q V	.	.	.	.
7.917	2.9370	5.84	.Q V	.	.	.	.
8.000	2.9774	5.87	.Q V	.	.	.	.
8.083	3.0181	5.91	.Q V	.	.	.	.
8.167	3.0590	5.95	.Q V	.	.	.	.
8.250	3.1002	5.98	.Q V	.	.	.	.
8.333	3.1417	6.02	.Q V	.	.	.	.
8.417	3.1834	6.06	.Q V	.	.	.	.
8.500	3.2255	6.10	.Q V	.	.	.	.
8.583	3.2678	6.14	.Q V	.	.	.	.
8.667	3.3103	6.18	.Q V	.	.	.	.
8.750	3.3532	6.22	.Q V	.	.	.	.

8.833	3.3964	6.27	.Q	V	.	.	.	.
8.917	3.4398	6.31	.Q	V	.	.	.	.
9.000	3.4836	6.36	.Q	V	.	.	.	.
9.083	3.5277	6.40	.Q	V	.	.	.	.
9.167	3.5721	6.45	.Q	V	.	.	.	.
9.250	3.6168	6.49	.Q	V	.	.	.	.
9.333	3.6619	6.54	.Q	V	.	.	.	.
9.417	3.7072	6.59	.Q	V	.	.	.	.
9.500	3.7530	6.64	.Q	V	.	.	.	.
9.583	3.7990	6.69	.Q	V	.	.	.	.
9.667	3.8455	6.74	.Q	V	.	.	.	.
9.750	3.8923	6.79	.Q	V	.	.	.	.
9.833	3.9394	6.85	.Q	V	.	.	.	.
9.917	3.9869	6.90	.Q	V	.	.	.	.
10.000	4.0349	6.96	.Q	V	.	.	.	.
10.083	4.0832	7.02	.Q	V	.	.	.	.
10.167	4.1319	7.07	.Q	V	.	.	.	.
10.250	4.1810	7.13	.Q	V	.	.	.	.
10.333	4.2306	7.19	.Q	V	.	.	.	.
10.417	4.2806	7.26	.Q	V	.	.	.	.
10.500	4.3310	7.32	.Q	V	.	.	.	.
10.583	4.3818	7.39	.Q	V	.	.	.	.
10.667	4.4332	7.45	.Q	V	.	.	.	.
10.750	4.4850	7.52	.Q	V	.	.	.	.
10.833	4.5372	7.59	.Q	V	.	.	.	.
10.917	4.5900	7.66	.Q	V	.	.	.	.
11.000	4.6433	7.74	.Q	V	.	.	.	.
11.083	4.6971	7.81	.Q	V	.	.	.	.
11.167	4.7514	7.89	.Q	V	.	.	.	.
11.250	4.8063	7.97	.Q	V	.	.	.	.
11.333	4.8617	8.05	.Q	V	.	.	.	.
11.417	4.9178	8.13	.Q	V	.	.	.	.
11.500	4.9744	8.22	.Q	V	.	.	.	.
11.583	5.0316	8.31	.Q	V	.	.	.	.
11.667	5.0894	8.40	.Q	V	.	.	.	.
11.750	5.1479	8.49	.Q	V	.	.	.	.
11.833	5.2070	8.59	.Q	V	.	.	.	.
11.917	5.2668	8.69	.Q	V	.	.	.	.
12.000	5.3274	8.79	.Q	V	.	.	.	.
12.083	5.3889	8.93	.Q	V	.	.	.	.
12.167	5.4520	9.16	.Q	V	.	.	.	.
12.250	5.5179	9.57	.Q	V	.	.	.	.
12.333	5.5874	10.09	.Q	V	.	.	.	.
12.417	5.6611	10.71	.Q	V	.	.	.	.
12.500	5.7392	11.33	.Q	V	.	.	.	.
12.583	5.8206	11.82	.Q	V	.	.	.	.
12.667	5.9046	12.19	.Q	V	.	.	.	.
12.750	5.9904	12.47	.Q	V	.	.	.	.
12.833	6.0779	12.70	.Q	V	.	.	.	.
12.917	6.1668	12.91	.Q	V	.	.	.	.
13.000	6.2569	13.09	.Q	V	.	.	.	.
13.083	6.3483	13.27	.Q	V	.	.	.	.
13.167	6.4409	13.45	.Q	.V	.	.	.	.
13.250	6.5349	13.65	.Q	.V	.	.	.	.
13.333	6.6303	13.84	.Q	.V	.	.	.	.
13.417	6.7270	14.04	.Q	.V	.	.	.	.
13.500	6.8251	14.25	.Q	.V	.	.	.	.
13.583	6.9247	14.46	.Q	.V	.	.	.	.

13.667	7.0258	14.68	.Q	.V	.	.	.	.
13.750	7.1286	14.92	.Q	.V	.	.	.	.
13.833	7.2330	15.17	.Q	.V	.	.	.	.
13.917	7.3392	15.43	.Q	.V	.	.	.	.
14.000	7.4473	15.70	.Q	.V	.	.	.	.
14.083	7.5575	16.00	.Q	.V	.	.	.	.
14.167	7.6703	16.37	.Q	.V	.	.	.	.
14.250	7.7863	16.84	.Q	.V	.	.	.	.
14.333	7.9060	17.38	.Q	.V	.	.	.	.
14.417	8.0300	18.01	.Q	.V	.	.	.	.
14.500	8.1584	18.64	.Q	.V	.	.	.	.
14.583	8.2909	19.24	.Q	.V	.	.	.	.
14.667	8.4271	19.79	.Q	.V	.	.	.	.
14.750	8.5671	20.33	.Q	.V	.	.	.	.
14.833	8.7109	20.88	.Q	.V	.	.	.	.
14.917	8.8586	21.45	.Q	.V	.	.	.	.
15.000	9.0105	22.05	.Q	.V	.	.	.	.
15.083	9.1669	22.71	.Q	.V	.	.	.	.
15.167	9.3282	23.42	.Q	.V	.	.	.	.
15.250	9.4950	24.22	.Q	.V	.	.	.	.
15.333	9.6679	25.10	.Q	.V	.	.	.	.
15.417	9.8470	26.00	.Q	.V	.	.	.	.
15.500	10.0316	26.81	.Q	.V	.	.	.	.
15.583	10.2200	27.36	.Q	.V	.	.	.	.
15.667	10.4119	27.86	.Q	.V	.	.	.	.
15.750	10.6082	28.51	.Q	.V	.	.	.	.
15.833	10.8140	29.88	.Q	.V	.	.	.	.
15.917	11.0428	33.21	.Q	.V	.	.	.	.
16.000	11.3151	39.54	.Q	.V	.	.	.	.
16.083	11.6905	54.50	.Q	.V	.	.	.	.
16.167	12.2334	78.84	.	.Q	.V	.	.	.
16.250	13.0097	112.71	.	.	.Q	.	.	.
16.333	13.9242	132.79	.	.	.V	.Q	.	.
16.417	14.9279	145.73	.	.	.V	.Q	.	.
16.500	15.8683	136.55	.	.	.	.Q	.	.
16.583	16.6044	106.88	.	.	.Q	.V	.	.
16.667	17.1482	78.96	.	.Q	.	.V	.	.
16.750	17.5526	58.72	.	.Q	.	.V	.	.
16.833	17.8707	46.19	.	.Q	.	.V	.	.
16.917	18.1261	37.07	.	.Q	.	.V	.	.
17.000	18.3334	30.10	.	.Q	.	.V	.	.
17.083	18.5202	27.13	.	.Q	.	.V	.	.
17.167	18.6957	25.48	.	.Q	.	.V	.	.
17.250	18.8600	23.85	.	.Q	.	.V	.	.
17.333	19.0113	21.97	.	.Q	.	.V	.	.
17.417	19.1435	19.20	.Q	.	.	.V	.	.
17.500	19.2673	17.98	.Q	.	.	.V	.	.
17.583	19.3848	17.06	.Q	.	.	.V	.	.
17.667	19.4971	16.30	.Q	.	.	.V	.	.
17.750	19.6048	15.64	.Q	.	.	.V	.	.
17.833	19.7086	15.07	.Q	.	.	.V	.	.
17.917	19.8089	14.57	.Q	.	.	.V	.	.
18.000	19.9062	14.13	.Q	.	.	.V	.	.
18.083	20.0005	13.69	.Q	.	.	.V	.	.
18.167	20.0913	13.19	.Q	.	.	.V	.	.
18.250	20.1778	12.55	.Q	.	.	.V	.	.
18.333	20.2593	11.84	.Q	.	.	.V	.	.
18.417	20.3354	11.05	.Q	.	.	.V	.	.

18.500	20.4063	10.29	. Q	.	.	.	V	.
18.583	20.4731	9.69	.Q	.	.	.	V	.
18.667	20.5368	9.24	.Q	.	.	.	V	.
18.750	20.5980	8.90	.Q	.	.	.	V	.
18.833	20.6574	8.62	.Q	.	.	.	V	.
18.917	20.7151	8.38	.Q	.	.	.	V	.
19.000	20.7715	8.19	.Q	.	.	.	V	.
19.083	20.8266	8.01	.Q	.	.	.	V	.
19.167	20.8806	7.84	.Q	.	.	.	V	.
19.250	20.9335	7.68	.Q	.	.	.	V	.
19.333	20.9854	7.53	.Q	.	.	.	V	.
19.417	21.0363	7.39	.Q	.	.	.	V	.
19.500	21.0863	7.26	.Q	.	.	.	V	.
19.583	21.1354	7.14	.Q	.	.	.	V	.
19.667	21.1837	7.02	.Q	.	.	.	V	.
19.750	21.2313	6.90	.Q	.	.	.	V	.
19.833	21.2781	6.80	.Q	.	.	.	V	.
19.917	21.3242	6.69	.Q	.	.	.	V	.
20.000	21.3696	6.59	.Q	.	.	.	V	.
20.083	21.4143	6.49	.Q	.	.	.	V	.
20.167	21.4584	6.40	.Q	.	.	.	V	.
20.250	21.5019	6.31	.Q	.	.	.	V	.
20.333	21.5447	6.23	.Q	.	.	.	V	.
20.417	21.5870	6.14	.Q	.	.	.	V	.
20.500	21.6288	6.06	.Q	.	.	.	V	.
20.583	21.6700	5.98	.Q	.	.	.	V	.
20.667	21.7107	5.91	.Q	.	.	.	V	.
20.750	21.7509	5.84	.Q	.	.	.	V	.
20.833	21.7906	5.76	.Q	.	.	.	V	.
20.917	21.8298	5.70	.Q	.	.	.	V	.
21.000	21.8686	5.63	.Q	.	.	.	V	.
21.083	21.9069	5.57	.Q	.	.	.	V	.
21.167	21.9448	5.50	.Q	.	.	.	V	.
21.250	21.9823	5.44	.Q	.	.	.	V	.
21.333	22.0193	5.38	.Q	.	.	.	V	.
21.417	22.0560	5.33	.Q	.	.	.	V	.
21.500	22.0923	5.27	.Q	.	.	.	V	.
21.583	22.1282	5.21	.Q	.	.	.	V	.
21.667	22.1638	5.16	.Q	.	.	.	V	.
21.750	22.1990	5.11	.Q	.	.	.	V	.
21.833	22.2338	5.06	.Q	.	.	.	V	.
21.917	22.2683	5.01	.Q	.	.	.	V	.
22.000	22.3025	4.96	Q	.	.	.	V	.
22.083	22.3364	4.92	Q	.	.	.	V	.
22.167	22.3699	4.87	Q	.	.	.	V	.
22.250	22.4032	4.83	Q	.	.	.	V	.
22.333	22.4361	4.78	Q	.	.	.	V	.
22.417	22.4688	4.74	Q	.	.	.	V	.
22.500	22.5011	4.70	Q	.	.	.	V	.
22.583	22.5332	4.66	Q	.	.	.	V	.
22.667	22.5650	4.62	Q	.	.	.	V	.
22.750	22.5966	4.58	Q	.	.	.	V	.
22.833	22.6279	4.54	Q	.	.	.	V	.
22.917	22.6589	4.51	Q	.	.	.	V	.
23.000	22.6897	4.47	Q	.	.	.	V	.
23.083	22.7202	4.43	Q	.	.	.	V	.
23.167	22.7505	4.40	Q	.	.	.	V	.
23.250	22.7806	4.36	Q	.	.	.	V	.

23.333	22.8104	4.33	Q	.	.	.	V	.
23.417	22.8400	4.30	Q	.	.	.	V	.
23.500	22.8694	4.27	Q	.	.	.	V	.
23.583	22.8985	4.23	Q	.	.	.	V	.
23.667	22.9275	4.20	Q	.	.	.	V	.
23.750	22.9562	4.17	Q	.	.	.	V	.
23.833	22.9848	4.14	Q	.	.	.	V	.
23.917	23.0131	4.11	Q	.	.	.	V	.
24.000	23.0412	4.09	Q	.	.	.	V	.
24.083	23.0688	4.01	Q	.	.	.	V	.
24.167	23.0950	3.80	Q	.	.	.	V	.
24.250	23.1181	3.35	Q	.	.	.	V	.
24.333	23.1372	2.77	Q	.	.	.	V	.
24.417	23.1512	2.03	Q	.	.	.	V	.
24.500	23.1602	1.31	Q	.	.	.	V	.
24.583	23.1657	0.80	Q	.	.	.	V	.
24.667	23.1690	0.47	Q	.	.	.	V	.
24.750	23.1709	0.28	Q	.	.	.	V	.
24.833	23.1720	0.16	Q	.	.	.	V	.
24.917	23.1726	0.09	Q	.	.	.	V	.
25.000	23.1731	0.06	Q	.	.	.	V	.
25.083	23.1734	0.05	Q	.	.	.	V	.
25.167	23.1736	0.03	Q	.	.	.	V	.
25.250	23.1737	0.01	Q	.	.	.	V	.

 TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:

(Note: 100% of Peak Flow Rate estimate assumed to have
 an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====
0%	1515.0
10%	255.0
20%	75.0
30%	50.0
40%	40.0
50%	35.0
60%	25.0
70%	25.0
80%	15.0
90%	15.0

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

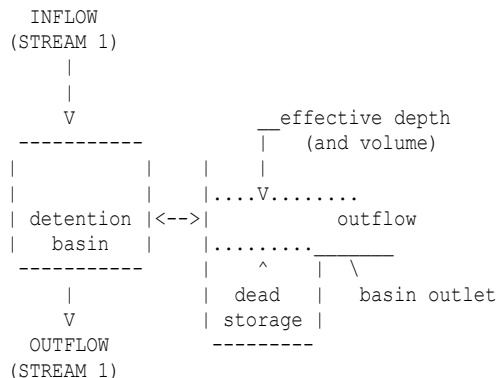
 >>>>STREAM NUMBER 3 ADDED TO STREAM NUMBER 1<<<<<<
 =====

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

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

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

>>>>FLOW-THROUGH DETENTION BASIN ROUTING MODEL APPLIED TO STREAM #1<<<<<



ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 1
THROUGH A FLOW-THROUGH DETENTION BASIN
SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:

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

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

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

=====

MODIFIED-PULS BASIN ROUTING MODEL RESULTS(5-MINUTE COMPUTATION INTERVALS):
 (Note: Computed EFFECTIVE DEPTH and VOLUME are estimated at the clock time;
 MEAN OUTFLOW is the average value during the unit interval.)

CLOCK TIME (HRS)	DEAD-STORAGE FILLED(AF)	INFLOW (CFS)	LOSS (CFS)	EFFECTIVE DEPTH (FT)	MEAN OUTFLOW (CFS)	EFFECTIVE VOLUME (AF)
0.083	0.000	1.07	0.00	0.00	0.0	0.007
0.167	0.000	6.20	0.00	0.03	0.0	0.050
0.250	0.000	16.58	0.00	0.08	0.0	0.164
0.333	0.000	30.13	0.00	0.19	0.0	0.372
0.417	0.000	42.42	0.00	0.33	0.0	0.664
0.500	0.000	50.00	0.00	0.50	0.0	1.008
0.583	0.000	54.19	0.00	0.69	0.0	1.381
0.667	0.000	56.46	0.00	0.89	0.0	1.770
0.750	0.000	57.62	0.00	1.04	0.0	2.167
0.833	0.000	58.26	0.00	1.14	0.0	2.568
0.917	0.000	58.77	0.00	1.24	0.0	2.973
1.000	0.000	59.20	0.00	1.35	0.0	3.380
1.083	0.000	59.52	0.00	1.45	0.0	3.790
1.167	0.000	59.77	0.00	1.55	0.0	4.202
1.250	0.000	60.00	0.00	1.65	0.0	4.615
1.333	0.000	60.22	0.00	1.76	0.0	5.029
1.417	0.000	60.43	0.00	1.86	0.0	5.445
1.500	0.000	60.64	0.00	1.97	0.0	5.863
1.583	0.000	60.86	0.00	2.04	0.0	6.282
1.667	0.000	61.07	0.00	2.10	0.0	6.702
1.750	0.000	61.29	0.00	2.16	0.0	7.124
1.833	0.000	61.51	0.00	2.22	0.0	7.548
1.917	0.000	61.74	0.00	2.28	0.0	7.973
2.000	0.000	61.96	0.00	2.34	0.0	8.399
2.083	0.000	62.19	0.00	2.40	0.0	8.828
2.167	0.000	62.42	0.00	2.47	0.0	9.257
2.250	0.000	62.65	0.00	2.53	0.0	9.689
2.333	0.000	62.89	0.00	2.59	0.0	10.122
2.417	0.000	63.12	0.00	2.65	0.0	10.556
2.500	0.000	63.36	0.00	2.71	0.0	10.992
2.583	0.000	63.60	0.00	2.78	0.0	11.430
2.667	0.000	63.85	0.00	2.84	0.0	11.870
2.750	0.000	64.09	0.00	2.90	0.0	12.311
2.833	0.000	64.34	0.00	2.96	0.0	12.754
2.917	0.000	64.59	0.00	3.02	0.0	13.198
3.000	0.000	64.84	0.00	3.08	0.0	13.645
3.083	0.000	65.10	0.00	3.14	0.0	14.093
3.167	0.000	65.36	0.00	3.19	0.0	14.543
3.250	0.000	65.62	0.00	3.25	0.0	14.994
3.333	0.000	65.88	0.00	3.31	0.0	15.448
3.417	0.000	66.15	0.00	3.36	0.0	15.903
3.500	0.000	66.42	0.00	3.42	0.0	16.360
3.583	0.000	66.69	0.00	3.48	0.0	16.819
3.667	0.000	66.97	0.00	3.54	0.0	17.280
3.750	0.000	67.24	0.00	3.59	0.0	17.743
3.833	0.000	67.53	0.00	3.65	0.0	18.208
3.917	0.000	67.81	0.00	3.71	0.0	18.674
4.000	0.000	68.10	0.00	3.77	0.0	19.143

4.083	0.000	68.39	0.00	3.83	0.0	19.614
4.167	0.000	68.68	0.00	3.89	0.0	20.087
4.250	0.000	68.98	0.00	3.95	0.0	20.561
4.333	0.000	69.28	0.00	4.00	0.0	21.038
4.417	0.000	69.58	0.00	4.06	0.0	21.517
4.500	0.000	69.89	0.00	4.11	0.0	21.998
4.583	0.000	70.20	0.00	4.16	0.0	22.481
4.667	0.000	70.51	0.00	4.22	0.0	22.967
4.750	0.000	70.83	0.00	4.27	0.0	23.454
4.833	0.000	71.15	0.00	4.33	0.0	23.944
4.917	0.000	71.48	0.00	4.38	0.0	24.436
5.000	0.000	71.81	0.00	4.44	0.0	24.930
5.083	0.000	72.14	0.00	4.49	0.0	25.426
5.167	0.000	72.48	0.00	4.55	0.0	25.925
5.250	0.000	72.82	0.00	4.60	0.1	26.426
5.333	0.000	73.17	0.00	4.66	0.1	26.930
5.417	0.000	73.52	0.00	4.72	0.1	27.436
5.500	0.000	73.87	0.00	4.77	0.1	27.944
5.583	0.000	74.23	0.00	4.83	0.1	28.455
5.667	0.000	74.59	0.00	4.89	0.1	28.969
5.750	0.000	74.96	0.00	4.94	0.1	29.484
5.833	0.000	75.33	0.00	5.00	0.1	30.003
5.917	0.000	75.71	0.00	5.05	0.1	30.524
6.000	0.000	76.09	0.00	5.10	0.1	31.048
6.083	0.000	76.48	0.00	5.14	0.1	31.574
6.167	0.000	76.87	0.00	5.19	0.1	32.103
6.250	0.000	77.27	0.00	5.24	0.1	32.635
6.333	0.000	77.68	0.00	5.29	0.1	33.169
6.417	0.000	78.09	0.00	5.34	0.1	33.707
6.500	0.000	78.50	0.00	5.39	0.1	34.247
6.583	0.000	78.92	0.00	5.44	0.1	34.790
6.667	0.000	79.35	0.00	5.49	0.1	35.336
6.750	0.000	79.78	0.00	5.54	0.1	35.885
6.833	0.000	80.22	0.00	5.59	0.1	36.437
6.917	0.000	80.66	0.00	5.64	0.1	36.992
7.000	0.000	81.11	0.00	5.69	0.1	37.551
7.083	0.000	81.57	0.00	5.74	0.1	38.112
7.167	0.000	82.03	0.00	5.79	0.1	38.676
7.250	0.000	82.51	0.00	5.84	0.1	39.244
7.333	0.000	82.98	0.00	5.89	0.1	39.815
7.417	0.000	83.47	0.00	5.94	0.1	40.390
7.500	0.000	83.96	0.00	6.00	0.1	40.967
7.583	0.000	84.46	0.00	6.04	1.5	41.539
7.667	0.000	84.97	0.00	6.09	4.3	42.095
7.750	0.000	85.49	0.00	6.14	7.1	42.635
7.833	0.000	86.01	0.00	6.18	9.9	43.159
7.917	0.000	86.55	0.00	6.22	12.5	43.669
8.000	0.000	87.09	0.00	6.26	15.1	44.165
8.083	0.000	87.64	0.00	6.30	17.6	44.647
8.167	0.000	88.20	0.00	6.34	20.1	45.116
8.250	0.000	88.77	0.00	6.38	22.5	45.572
8.333	0.000	89.35	0.00	6.42	24.8	46.017
8.417	0.000	89.93	0.00	6.45	27.1	46.449
8.500	0.000	90.53	0.00	6.49	29.3	46.871
8.583	0.000	91.14	0.00	6.52	31.4	47.283
8.667	0.000	91.76	0.00	6.56	33.5	47.684
8.750	0.000	92.39	0.00	6.59	35.6	48.075
8.833	0.000	93.03	0.00	6.62	37.6	48.457

8.917	0.000	93.69	0.00	6.65	39.5	48.830
9.000	0.000	94.35	0.00	6.68	41.4	49.195
9.083	0.000	95.03	0.00	6.71	43.3	49.551
9.167	0.000	95.72	0.00	6.74	45.1	49.900
9.250	0.000	96.43	0.00	6.77	46.9	50.241
9.333	0.000	97.15	0.00	6.80	48.6	50.575
9.417	0.000	97.88	0.00	6.83	50.3	50.903
9.500	0.000	98.62	0.00	6.85	52.0	51.224
9.583	0.000	99.38	0.00	6.88	53.6	51.539
9.667	0.000	100.16	0.00	6.90	55.3	51.848
9.750	0.000	100.95	0.00	6.93	56.8	52.152
9.833	0.000	101.76	0.00	6.95	58.4	52.450
9.917	0.000	102.59	0.00	6.98	59.9	52.744
10.000	0.000	103.43	0.00	7.00	61.6	53.032
10.083	0.000	104.30	0.00	7.02	64.8	53.304
10.167	0.000	105.18	0.00	7.04	69.2	53.552
10.250	0.000	106.08	0.00	7.06	73.1	53.779
10.333	0.000	107.00	0.00	7.08	76.7	53.988
10.417	0.000	107.94	0.00	7.09	80.1	54.180
10.500	0.000	108.90	0.00	7.10	83.2	54.357
10.583	0.000	109.89	0.00	7.12	86.0	54.521
10.667	0.000	110.89	0.00	7.13	88.7	54.674
10.750	0.000	111.93	0.00	7.14	91.1	54.817
10.833	0.000	112.99	0.00	7.15	93.5	54.952
10.917	0.000	114.07	0.00	7.16	95.6	55.079
11.000	0.000	115.18	0.00	7.17	97.7	55.199
11.083	0.000	116.33	0.00	7.18	99.7	55.314
11.167	0.000	117.50	0.00	7.19	101.5	55.424
11.250	0.000	118.70	0.00	7.19	103.3	55.530
11.333	0.000	119.93	0.00	7.20	105.1	55.632
11.417	0.000	121.20	0.00	7.21	106.8	55.731
11.500	0.000	122.50	0.00	7.22	108.4	55.828
11.583	0.000	123.84	0.00	7.22	110.0	55.924
11.667	0.000	125.22	0.00	7.23	111.6	56.018
11.750	0.000	126.64	0.00	7.24	113.1	56.111
11.833	0.000	128.10	0.00	7.25	114.7	56.203
11.917	0.000	129.61	0.00	7.25	116.2	56.295
12.000	0.000	131.16	0.00	7.26	117.8	56.387
12.083	0.000	133.52	0.00	7.27	119.4	56.485
12.167	0.000	138.77	0.00	7.28	121.2	56.606
12.250	0.000	147.77	0.00	7.29	123.6	56.773
12.333	0.000	159.04	0.00	7.31	126.8	56.994
12.417	0.000	169.50	0.00	7.33	130.9	57.260
12.500	0.000	176.70	0.00	7.35	135.5	57.544
12.583	0.000	181.60	0.00	7.37	140.2	57.829
12.667	0.000	185.20	0.00	7.39	144.9	58.106
12.750	0.000	188.12	0.00	7.41	149.5	58.373
12.833	0.000	190.73	0.00	7.43	153.8	58.627
12.917	0.000	193.35	0.00	7.45	158.0	58.871
13.000	0.000	196.00	0.00	7.47	162.0	59.105
13.083	0.000	198.66	0.00	7.49	165.8	59.332
13.167	0.000	201.38	0.00	7.50	169.5	59.551
13.250	0.000	204.18	0.00	7.52	173.1	59.765
13.333	0.000	207.10	0.00	7.54	176.7	59.974
13.417	0.000	210.14	0.00	7.55	180.1	60.181
13.500	0.000	213.31	0.00	7.57	183.6	60.386
13.583	0.000	216.62	0.00	7.58	187.0	60.590
13.667	0.000	220.09	0.00	7.60	190.4	60.794

13.750	0.000	223.73	0.00	7.62	193.8	61.000
13.833	0.000	227.54	0.00	7.63	197.3	61.209
13.917	0.000	231.56	0.00	7.65	200.8	61.421
14.000	0.000	235.79	0.00	7.66	204.4	61.637
14.083	0.000	240.64	0.00	7.68	208.0	61.861
14.167	0.000	247.22	0.00	7.70	211.9	62.104
14.250	0.000	255.98	0.00	7.72	216.3	62.378
14.333	0.000	266.18	0.00	7.75	221.1	62.688
14.417	0.000	276.26	0.00	7.77	226.6	63.030
14.500	0.000	284.99	0.00	7.80	232.5	63.392
14.583	0.000	292.91	0.00	7.83	238.6	63.766
14.667	0.000	300.58	0.00	7.86	244.9	64.150
14.750	0.000	308.41	0.00	7.89	251.4	64.542
14.833	0.000	316.62	0.00	7.92	258.0	64.946
14.917	0.000	325.51	0.00	7.95	264.9	65.363
15.000	0.000	335.22	0.00	7.98	272.0	65.799
15.083	0.000	346.10	0.00	8.02	280.6	66.250
15.167	0.000	358.79	0.00	8.05	291.7	66.712
15.250	0.000	374.00	0.00	8.09	304.2	67.192
15.333	0.000	392.30	0.00	8.13	317.4	67.708
15.417	0.000	411.34	0.00	8.17	331.5	68.258
15.500	0.000	424.14	0.00	8.22	345.9	68.797
15.583	0.000	428.62	0.00	8.25	359.3	69.274
15.667	0.000	431.19	0.00	8.28	371.1	69.688
15.750	0.000	446.20	0.00	8.32	382.4	70.127
15.833	0.000	488.65	0.00	8.37	396.6	70.761
15.917	0.000	565.04	0.00	8.44	418.4	71.772
16.000	0.000	691.54	0.00	8.57	453.4	73.412
16.083	0.000	947.81	0.00	8.80	514.6	76.395
16.167	0.000	1415.50	0.00	9.22	622.3	81.858
16.250	0.000	1891.34	0.00	9.81	780.8	89.506
16.333	0.000	2083.70	0.00	10.42	932.5	97.435
16.417	0.000	1848.89	0.00	10.85	1027.3	103.093
16.500	0.000	1346.48	0.00	11.00	1071.7	104.986
16.583	0.000	957.12	0.00	10.93	1077.9	104.154
16.667	0.000	713.32	0.00	10.75	1059.0	101.773
16.750	0.000	563.62	0.00	10.51	1026.3	98.586
16.833	0.000	472.83	0.00	10.23	986.7	95.047
16.917	0.000	422.08	0.00	9.96	941.7	91.469
17.000	0.000	382.64	0.00	9.70	877.2	88.063
17.083	0.000	347.95	0.00	9.46	800.2	84.948
17.167	0.000	320.31	0.00	9.24	730.1	82.125
17.250	0.000	297.67	0.00	9.04	666.8	79.583
17.333	0.000	278.38	0.00	8.87	607.6	77.316
17.417	0.000	260.51	0.00	8.72	551.9	75.309
17.500	0.000	247.21	0.00	8.58	502.1	73.554
17.583	0.000	236.45	0.00	8.46	458.6	72.023
17.667	0.000	227.41	0.00	8.36	420.8	70.692
17.750	0.000	219.59	0.00	8.27	387.8	69.533
17.833	0.000	212.66	0.00	8.19	359.1	68.524
17.917	0.000	206.36	0.00	8.13	334.1	67.644
18.000	0.000	200.59	0.00	8.07	312.3	66.875
18.083	0.000	194.56	0.00	8.02	293.2	66.196
18.167	0.000	186.10	0.00	7.97	277.9	65.563
18.250	0.000	174.35	0.00	7.92	266.4	64.929
18.333	0.000	160.75	0.00	7.87	255.7	64.275
18.417	0.000	148.39	0.00	7.82	244.7	63.612
18.500	0.000	139.66	0.00	7.77	233.7	62.964

18.583	0.000	133.57	0.00	7.72	223.2	62.347
18.667	0.000	129.05	0.00	7.67	213.2	61.768
18.750	0.000	125.50	0.00	7.63	203.8	61.228
18.833	0.000	122.49	0.00	7.59	195.2	60.727
18.917	0.000	119.71	0.00	7.56	187.1	60.263
19.000	0.000	117.13	0.00	7.53	179.6	59.833
19.083	0.000	114.76	0.00	7.49	172.7	59.434
19.167	0.000	112.55	0.00	7.47	166.3	59.063
19.250	0.000	110.46	0.00	7.44	160.3	58.720
19.333	0.000	108.47	0.00	7.42	154.8	58.401
19.417	0.000	106.58	0.00	7.39	149.7	58.104
19.500	0.000	104.78	0.00	7.37	144.9	57.828
19.583	0.000	103.05	0.00	7.35	140.4	57.570
19.667	0.000	101.39	0.00	7.33	136.3	57.330
19.750	0.000	99.80	0.00	7.32	132.4	57.105
19.833	0.000	98.28	0.00	7.30	128.8	56.895
19.917	0.000	96.81	0.00	7.28	125.4	56.699
20.000	0.000	95.40	0.00	7.27	122.2	56.514
20.083	0.000	94.04	0.00	7.26	119.2	56.341
20.167	0.000	92.73	0.00	7.24	116.4	56.178
20.250	0.000	91.47	0.00	7.23	113.8	56.024
20.333	0.000	90.24	0.00	7.22	111.3	55.879
20.417	0.000	89.07	0.00	7.21	108.9	55.743
20.500	0.000	87.93	0.00	7.20	106.7	55.613
20.583	0.000	86.82	0.00	7.19	104.6	55.491
20.667	0.000	85.76	0.00	7.18	102.6	55.375
20.750	0.000	84.72	0.00	7.17	100.7	55.265
20.833	0.000	83.72	0.00	7.17	98.9	55.160
20.917	0.000	82.75	0.00	7.16	97.2	55.060
21.000	0.000	81.80	0.00	7.15	95.6	54.965
21.083	0.000	80.89	0.00	7.14	94.0	54.875
21.167	0.000	80.00	0.00	7.14	92.6	54.788
21.250	0.000	79.13	0.00	7.13	91.2	54.705
21.333	0.000	78.29	0.00	7.13	89.8	54.626
21.417	0.000	77.47	0.00	7.12	88.5	54.550
21.500	0.000	76.68	0.00	7.11	87.3	54.477
21.583	0.000	75.90	0.00	7.11	86.1	54.407
21.667	0.000	75.14	0.00	7.10	84.9	54.340
21.750	0.000	74.41	0.00	7.10	83.8	54.275
21.833	0.000	73.69	0.00	7.09	82.8	54.212
21.917	0.000	72.99	0.00	7.09	81.7	54.152
22.000	0.000	72.30	0.00	7.08	80.7	54.094
22.083	0.000	71.64	0.00	7.08	79.8	54.038
22.167	0.000	70.99	0.00	7.08	78.9	53.984
22.250	0.000	70.35	0.00	7.07	78.0	53.931
22.333	0.000	69.73	0.00	7.07	77.1	53.880
22.417	0.000	69.12	0.00	7.06	76.3	53.831
22.500	0.000	68.53	0.00	7.06	75.5	53.783
22.583	0.000	67.95	0.00	7.06	74.7	53.737
22.667	0.000	67.38	0.00	7.05	73.9	53.692
22.750	0.000	66.82	0.00	7.05	73.2	53.648
22.833	0.000	66.28	0.00	7.05	72.5	53.605
22.917	0.000	65.74	0.00	7.04	71.8	53.564
23.000	0.000	65.22	0.00	7.04	71.1	53.523
23.083	0.000	64.71	0.00	7.04	70.4	53.484
23.167	0.000	64.21	0.00	7.03	69.8	53.446
23.250	0.000	63.72	0.00	7.03	69.1	53.409
23.333	0.000	63.23	0.00	7.03	68.5	53.372

23.417	0.000	62.76	0.00	7.03	67.9	53.337
23.500	0.000	62.30	0.00	7.02	67.3	53.302
23.583	0.000	61.84	0.00	7.02	66.8	53.268
23.667	0.000	61.40	0.00	7.02	66.2	53.235
23.750	0.000	60.96	0.00	7.02	65.7	53.203
23.833	0.000	60.53	0.00	7.01	65.1	53.171
23.917	0.000	60.11	0.00	7.01	64.6	53.140
24.000	0.000	59.69	0.00	7.01	64.1	53.110
24.083	0.000	58.22	0.00	7.01	63.5	53.073
24.167	0.000	52.71	0.00	7.00	62.7	53.005
24.250	0.000	42.02	0.00	6.99	61.7	52.869
24.333	0.000	28.27	0.00	6.97	60.7	52.646
24.417	0.000	15.90	0.00	6.95	59.4	52.346
24.500	0.000	8.37	0.00	6.92	57.7	52.006
24.583	0.000	4.29	0.00	6.89	56.0	51.650
24.667	0.000	2.18	0.00	6.86	54.1	51.293
24.750	0.000	1.19	0.00	6.83	52.3	50.941
24.833	0.000	0.75	0.00	6.80	50.5	50.598
24.917	0.000	0.43	0.00	6.77	48.7	50.265
25.000	0.000	0.19	0.00	6.75	47.1	49.943
25.083	0.000	0.08	0.00	6.72	45.4	49.630
25.167	0.000	0.03	0.00	6.69	43.8	49.329
25.250	0.000	0.01	0.00	6.67	42.3	49.038
25.333	0.000	0.00	0.00	6.65	40.8	48.756
25.417	0.000	0.00	0.00	6.62	39.4	48.485
25.500	0.000	0.00	0.00	6.60	38.0	48.223
25.583	0.000	0.00	0.00	6.58	36.7	47.970
25.667	0.000	0.00	0.00	6.56	35.4	47.727
25.750	0.000	0.00	0.00	6.54	34.2	47.491
25.833	0.000	0.00	0.00	6.52	33.0	47.264
25.917	0.000	0.00	0.00	6.50	31.8	47.045
26.000	0.000	0.00	0.00	6.49	30.7	46.833
26.083	0.000	0.00	0.00	6.47	29.6	46.629
26.167	0.000	0.00	0.00	6.45	28.6	46.432
26.250	0.000	0.00	0.00	6.44	27.6	46.242
26.333	0.000	0.00	0.00	6.42	26.6	46.058
26.417	0.000	0.00	0.00	6.41	25.7	45.881
26.500	0.000	0.00	0.00	6.39	24.8	45.710
26.583	0.000	0.00	0.00	6.38	24.0	45.545
26.667	0.000	0.00	0.00	6.37	23.1	45.386
26.750	0.000	0.00	0.00	6.35	22.3	45.233
26.833	0.000	0.00	0.00	6.34	21.5	45.084
26.917	0.000	0.00	0.00	6.33	20.8	44.941
27.000	0.000	0.00	0.00	6.32	20.1	44.803
27.083	0.000	0.00	0.00	6.31	19.4	44.670
27.167	0.000	0.00	0.00	6.30	18.7	44.541
27.250	0.000	0.00	0.00	6.28	18.0	44.417
27.333	0.000	0.00	0.00	6.27	17.4	44.297
27.417	0.000	0.00	0.00	6.27	16.8	44.182
27.500	0.000	0.00	0.00	6.26	16.2	44.070
27.583	0.000	0.00	0.00	6.25	15.6	43.962
27.667	0.000	0.00	0.00	6.24	15.1	43.859
27.750	0.000	0.00	0.00	6.23	14.6	43.758
27.833	0.000	0.00	0.00	6.22	14.1	43.662
27.917	0.000	0.00	0.00	6.21	13.6	43.568
28.000	0.000	0.00	0.00	6.21	13.1	43.478
28.083	0.000	0.00	0.00	6.20	12.6	43.391
28.167	0.000	0.00	0.00	6.19	12.2	43.307

28.250	0.000	0.00	0.00	6.19	11.8	43.226
28.333	0.000	0.00	0.00	6.18	11.4	43.148
28.417	0.000	0.00	0.00	6.17	11.0	43.072
28.500	0.000	0.00	0.00	6.17	10.6	43.000
28.583	0.000	0.00	0.00	6.16	10.2	42.929
28.667	0.000	0.00	0.00	6.16	9.8	42.861
28.750	0.000	0.00	0.00	6.15	9.5	42.796
28.833	0.000	0.00	0.00	6.14	9.2	42.733
28.917	0.000	0.00	0.00	6.14	8.9	42.672
29.000	0.000	0.00	0.00	6.13	8.5	42.613
29.083	0.000	0.00	0.00	6.13	8.2	42.556
29.167	0.000	0.00	0.00	6.13	8.0	42.501
29.250	0.000	0.00	0.00	6.12	7.7	42.449
29.333	0.000	0.00	0.00	6.12	7.4	42.397
29.417	0.000	0.00	0.00	6.11	7.2	42.348
29.500	0.000	0.00	0.00	6.11	6.9	42.301
29.583	0.000	0.00	0.00	6.10	6.7	42.255
29.667	0.000	0.00	0.00	6.10	6.4	42.211
29.750	0.000	0.00	0.00	6.10	6.2	42.168
29.833	0.000	0.00	0.00	6.09	6.0	42.127
29.917	0.000	0.00	0.00	6.09	5.8	42.087

PROCESS SUMMARY OF STORAGE:

INFLOW VOLUME = 329.560 AF
 BASIN STORAGE = 36.769 AF (WITH 0.000 AF INITIALLY FILLED)
 OUTFLOW VOLUME = 292.777 AF
 LOSS VOLUME = 0.000 AF

 FLOW PROCESS FROM NODE 331.00 TO NODE 331.00 IS CODE = 11

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

STREAM HYDROGRAPH IN FIVE-MINUTE UNIT INTERVALS (CFS)
 (Note: Time indicated is at END of Each Unit Intervals)

TIME (HRS)	VOLUME (AF)	Q(CFS)	0.	275.0	550.0	825.0	1100.0
0.083	0.0000	0.00	Q	.	.	.	.
0.167	0.0000	0.00	Q	.	.	.	.
0.250	0.0000	0.00	Q	.	.	.	.
0.333	0.0000	0.00	Q	.	.	.	.
0.417	0.0000	0.00	Q	.	.	.	.
0.500	0.0001	0.00	Q	.	.	.	.
0.583	0.0001	0.01	Q	.	.	.	.
0.667	0.0002	0.01	Q	.	.	.	.
0.750	0.0002	0.01	Q	.	.	.	.
0.833	0.0003	0.01	Q	.	.	.	.
0.917	0.0004	0.01	Q	.	.	.	.
1.000	0.0005	0.01	Q	.	.	.	.
1.083	0.0006	0.02	Q	.	.	.	.
1.167	0.0007	0.02	Q	.	.	.	.
1.250	0.0009	0.02	Q	.	.	.	.
1.333	0.0010	0.02	Q	.	.	.	.
1.417	0.0011	0.02	Q	.	.	.	.
1.500	0.0013	0.02	Q	.	.	.	.

1.583	0.0014	0.02	Q	.	.	.	.
1.667	0.0016	0.02	Q	.	.	.	.
1.750	0.0017	0.02	Q	.	.	.	.
1.833	0.0019	0.02	Q	.	.	.	.
1.917	0.0021	0.02	Q	.	.	.	.
2.000	0.0022	0.03	Q	.	.	.	.
2.083	0.0024	0.03	Q	.	.	.	.
2.167	0.0026	0.03	Q	.	.	.	.
2.250	0.0028	0.03	Q	.	.	.	.
2.333	0.0030	0.03	Q	.	.	.	.
2.417	0.0032	0.03	Q	.	.	.	.
2.500	0.0034	0.03	Q	.	.	.	.
2.583	0.0036	0.03	Q	.	.	.	.
2.667	0.0038	0.03	Q	.	.	.	.
2.750	0.0040	0.03	Q	.	.	.	.
2.833	0.0043	0.03	Q	.	.	.	.
2.917	0.0045	0.03	Q	.	.	.	.
3.000	0.0047	0.03	Q	.	.	.	.
3.083	0.0050	0.03	Q	.	.	.	.
3.167	0.0052	0.03	Q	.	.	.	.
3.250	0.0054	0.04	Q	.	.	.	.
3.333	0.0057	0.04	Q	.	.	.	.
3.417	0.0059	0.04	Q	.	.	.	.
3.500	0.0062	0.04	Q	.	.	.	.
3.583	0.0065	0.04	Q	.	.	.	.
3.667	0.0067	0.04	Q	.	.	.	.
3.750	0.0070	0.04	Q	.	.	.	.
3.833	0.0073	0.04	Q	.	.	.	.
3.917	0.0075	0.04	Q	.	.	.	.
4.000	0.0078	0.04	Q	.	.	.	.
4.083	0.0081	0.04	Q	.	.	.	.
4.167	0.0084	0.04	Q	.	.	.	.
4.250	0.0087	0.04	Q	.	.	.	.
4.333	0.0090	0.04	Q	.	.	.	.
4.417	0.0093	0.04	Q	.	.	.	.
4.500	0.0096	0.04	Q	.	.	.	.
4.583	0.0099	0.05	Q	.	.	.	.
4.667	0.0103	0.05	Q	.	.	.	.
4.750	0.0106	0.05	Q	.	.	.	.
4.833	0.0109	0.05	Q	.	.	.	.
4.917	0.0112	0.05	Q	.	.	.	.
5.000	0.0116	0.05	Q	.	.	.	.
5.083	0.0119	0.05	Q	.	.	.	.
5.167	0.0122	0.05	Q	.	.	.	.
5.250	0.0126	0.05	Q	.	.	.	.
5.333	0.0129	0.05	Q	.	.	.	.
5.417	0.0133	0.05	Q	.	.	.	.
5.500	0.0137	0.05	Q	.	.	.	.
5.583	0.0140	0.05	Q	.	.	.	.
5.667	0.0144	0.05	Q	.	.	.	.
5.750	0.0148	0.05	Q	.	.	.	.
5.833	0.0151	0.05	Q	.	.	.	.
5.917	0.0155	0.06	Q	.	.	.	.
6.000	0.0159	0.06	Q	.	.	.	.
6.083	0.0163	0.06	Q	.	.	.	.
6.167	0.0167	0.06	Q	.	.	.	.
6.250	0.0171	0.06	Q	.	.	.	.
6.333	0.0175	0.06	Q	.	.	.	.

6.417	0.0179	0.06	Q	.	.	.	.
6.500	0.0183	0.06	Q	.	.	.	.
6.583	0.0187	0.06	Q	.	.	.	.
6.667	0.0191	0.06	Q	.	.	.	.
6.750	0.0195	0.06	Q	.	.	.	.
6.833	0.0199	0.06	Q	.	.	.	.
6.917	0.0204	0.06	Q	.	.	.	.
7.000	0.0208	0.06	Q	.	.	.	.
7.083	0.0212	0.06	Q	.	.	.	.
7.167	0.0217	0.06	Q	.	.	.	.
7.250	0.0221	0.06	Q	.	.	.	.
7.333	0.0226	0.06	Q	.	.	.	.
7.417	0.0230	0.07	Q	.	.	.	.
7.500	0.0235	0.07	Q	.	.	.	.
7.583	0.0335	1.46	Q	.	.	.	.
7.667	0.0630	4.28	Q	.	.	.	.
7.750	0.1119	7.11	Q	.	.	.	.
7.833	0.1798	9.86	Q	.	.	.	.
7.917	0.2661	12.53	Q	.	.	.	.
8.000	0.3702	15.12	Q	.	.	.	.
8.083	0.4917	17.64	Q	.	.	.	.
8.167	0.6301	20.10	Q	.	.	.	.
8.250	0.7850	22.49	Q	.	.	.	.
8.333	0.9559	24.81	Q	.	.	.	.
8.417	1.1423	27.07	Q	.	.	.	.
8.500	1.3440	29.28	VQ	.	.	.	.
8.583	1.5604	31.43	VQ	.	.	.	.
8.667	1.7913	33.53	VQ	.	.	.	.
8.750	2.0363	35.57	VQ	.	.	.	.
8.833	2.2950	37.57	VQ	.	.	.	.
8.917	2.5672	39.52	VQ	.	.	.	.
9.000	2.8524	41.42	VQ	.	.	.	.
9.083	3.1505	43.28	VQ	.	.	.	.
9.167	3.4611	45.10	VQ	.	.	.	.
9.250	3.7840	46.88	VQ	.	.	.	.
9.333	4.1188	48.62	VQ	.	.	.	.
9.417	4.4655	50.33	VQ	.	.	.	.
9.500	4.8236	52.00	VQ	.	.	.	.
9.583	5.1931	53.65	VQ	.	.	.	.
9.667	5.5736	55.26	V Q	.	.	.	.
9.750	5.9651	56.84	V Q	.	.	.	.
9.833	6.3672	58.39	V Q	.	.	.	.
9.917	6.7799	59.92	V Q	.	.	.	.
10.000	7.2042	61.61	V Q	.	.	.	.
10.083	7.6506	64.81	.VQ	.	.	.	.
10.167	8.1268	69.15	.VQ	.	.	.	.
10.250	8.6304	73.12	.VQ	.	.	.	.
10.333	9.1590	76.75	.VQ	.	.	.	.
10.417	9.7105	80.09	.VQ	.	.	.	.
10.500	10.2833	83.17	.V Q	.	.	.	.
10.583	10.8757	86.02	.V Q	.	.	.	.
10.667	11.4864	88.67	.V Q	.	.	.	.
10.750	12.1141	91.14	.V Q	.	.	.	.
10.833	12.7577	93.46	.V Q	.	.	.	.
10.917	13.4164	95.64	.V Q	.	.	.	.
11.000	14.0893	97.70	.V Q	.	.	.	.
11.083	14.7757	99.67	. VQ	.	.	.	.
11.167	15.4750	101.54	. VQ	.	.	.	.

11.250	16.1868	103.34	. VQ	.	.	.
11.333	16.9104	105.08	. VQ	.	.	.
11.417	17.6457	106.76	. VQ	.	.	.
11.500	18.3923	108.40	. VQ	.	.	.
11.583	19.1499	110.01	. V Q	.	.	.
11.667	19.9184	111.59	. V Q	.	.	.
11.750	20.6977	113.15	. V Q	.	.	.
11.833	21.4876	114.69	. V Q	.	.	.
11.917	22.2881	116.23	. VQ	.	.	.
12.000	23.0992	117.77	. VQ	.	.	.
12.083	23.9212	119.36	. VQ	.	.	.
12.167	24.7558	121.18	. VQ	.	.	.
12.250	25.6069	123.58	. VQ	.	.	.
12.333	26.4803	126.82	. VQ	.	.	.
12.417	27.3818	130.89	. VQ	.	.	.
12.500	28.3149	135.48	. VQ	.	.	.
12.583	29.2806	140.23	. VQ	.	.	.
12.667	30.2787	144.92	. VQ	.	.	.
12.750	31.3081	149.46	. VQ	.	.	.
12.833	32.3673	153.80	. VQ	.	.	.
12.917	33.4552	157.96	. VQ	.	.	.
13.000	34.5706	161.95	. VQ	.	.	.
13.083	35.7125	165.80	. V Q	.	.	.
13.167	36.8800	169.52	. VQ	.	.	.
13.250	38.0723	173.14	. VQ	.	.	.
13.333	39.2891	176.67	. VQ	.	.	.
13.417	40.5297	180.14	. VQ	.	.	.
13.500	41.7940	183.58	. VQ	.	.	.
13.583	43.0818	186.99	. VQ	.	.	.
13.667	44.3931	190.40	. Q	.	.	.
13.750	45.7280	193.82	. VQ	.	.	.
13.833	47.0866	197.28	. VQ	.	.	.
13.917	48.4695	200.79	. VQ	.	.	.
14.000	49.8770	204.36	. VQ	.	.	.
14.083	51.3098	208.04	. Q	.	.	.
14.167	52.7694	211.95	. Q	.	.	.
14.250	54.2588	216.26	. Q	.	.	.
14.333	55.7817	221.13	. VQ	.	.	.
14.417	57.3422	226.57	. VQ	.	.	.
14.500	58.9431	232.45	. Q	.	.	.
14.583	60.5863	238.59	. Q	.	.	.
14.667	62.2730	244.91	. Q	.	.	.
14.750	64.0043	251.39	. VQ	.	.	.
14.833	65.7814	258.04	. VQ	.	.	.
14.917	67.6058	264.89	. Q	.	.	.
15.000	69.4791	272.01	. Q	.	.	.
15.083	71.4117	280.62	. VQ	.	.	.
15.167	73.4208	291.72	. Q	.	.	.
15.250	75.5158	304.19	. VQ	.	.	.
15.333	77.7016	317.38	. VQ	.	.	.
15.417	79.9845	331.48	. V Q	.	.	.
15.500	82.3667	345.89	. VQ	.	.	.
15.583	84.8414	359.33	. V Q	.	.	.
15.667	87.3973	371.12	. V Q	.	.	.
15.750	90.0310	382.41	. VQ	.	.	.
15.833	92.7624	396.61	. V Q	.	.	.
15.917	95.6437	418.36	. V Q	.	.	.
16.000	98.7665	453.42	. V Q	.	.	.

16.083	102.3105	514.60	.	.	V	Q	.	.	.
16.167	106.5962	622.28	.	.	V	.	Q	.	.
16.250	111.9736	780.80	.	.	V	.	.	Q	.
16.333	118.3960	932.54	.	.	V	.	.	.	Q
16.417	125.4708	1027.26	.	.	V	.	.	.	Q
16.500	132.8517	1071.69	.	.	V	.	.	.	Q
16.583	140.2755	1077.93	.	.	V	.	.	.	Q
16.667	147.5690	1059.03	.	.	V	.	.	.	Q
16.750	154.6370	1026.27	.	.	V	.	.	.	Q
16.833	161.4324	986.69	.	.	V	.	.	.	Q
16.917	167.9176	941.66	.	.	V	.	.	.	Q
17.000	173.9592	877.24	.	.	V	.	.	.	Q
17.083	179.4705	800.24	.	.	V	.	.	.	Q
17.167	184.4990	730.13	.	.	VQ	.	.	.	.
17.250	189.0912	666.79	.	.	QV	.	.	.	.
17.333	193.2757	607.60	.	.	Q	V	.	.	.
17.417	197.0766	551.88	.	.	Q	V	.	.	.
17.500	200.5346	502.10	.	.	Q	V	.	.	.
17.583	203.6932	458.63	.	.	Q	V	.	.	.
17.667	206.5910	420.77	.	.	Q	V	.	.	.
17.750	209.2620	387.82	.	.	Q	V	.	.	.
17.833	211.7354	359.14	.	.	Q	V	.	.	.
17.917	214.0367	334.15	.	.	Q	V	.	.	.
18.000	216.1877	312.32	.	.	Q	V	.	.	.
18.083	218.2067	293.16	.	.	Q	V	.	.	.
18.167	220.1209	277.94	.	.	Q	V	.	.	.
18.250	221.9557	266.41	.	.	Q	V	.	.	.
18.333	223.7165	255.67	.	.	Q	V	.	.	.
18.417	225.4016	244.68	.	.	Q	V	.	.	.
18.500	227.0113	233.73	.	.	Q	V	.	.	.
18.583	228.5483	223.17	.	.	Q	V	.	.	.
18.667	230.0166	213.19	.	.	Q	V	.	.	.
18.750	231.4205	203.85	.	.	Q	V	.	.	.
18.833	232.7646	195.17	.	.	Q	V	.	.	.
18.917	234.0533	187.12	.	.	Q	V	.	.	.
19.000	235.2905	179.65	.	.	Q	V	.	.	.
19.083	236.4801	172.72	.	.	Q	V	.	.	.
19.167	237.6254	166.30	.	.	Q	V	.	.	.
19.250	238.7297	160.34	.	.	Q	V	.	.	.
19.333	239.7959	154.81	.	.	Q	V	.	.	.
19.417	240.8267	149.67	.	.	Q	V	.	.	.
19.500	241.8246	144.89	.	.	Q	V	.	.	.
19.583	242.7918	140.44	.	.	Q	V	.	.	.
19.667	243.7303	136.28	.	.	Q	V	.	.	.
19.750	244.6422	132.40	.	.	Q	V	.	.	.
19.833	245.5291	128.78	.	.	Q	V	.	.	.
19.917	246.3926	125.38	.	.	Q	V	.	.	.
20.000	247.2342	122.20	.	.	Q	V	.	.	.
20.083	248.0552	119.21	.	.	Q	V	.	.	.
20.167	248.8568	116.40	.	.	Q	V	.	.	.
20.250	249.6403	113.76	.	.	Q	V	.	.	.
20.333	250.4066	111.27	.	.	Q	V	.	.	.
20.417	251.1568	108.92	.	.	Q	V	.	.	.
20.500	251.8916	106.70	.	.	Q	V	.	.	.
20.583	252.6120	104.60	.	.	Q	V	.	.	.
20.667	253.3187	102.61	.	.	Q	V	.	.	.
20.750	254.0124	100.72	.	.	Q	V	.	.	.
20.833	254.6937	98.93	.	.	Q	V	.	.	.

20.917	255.3633	97.22	. Q	.	.	.	V	.
21.000	256.0216	95.60	. Q	.	.	.	V	.
21.083	256.6693	94.05	. Q	.	.	.	V	.
21.167	257.3069	92.57	. Q	.	.	.	V	.
21.250	257.9346	91.15	. Q	.	.	.	V	.
21.333	258.5531	89.80	. Q	.	.	.	V	.
21.417	259.1627	88.51	. Q	.	.	.	V	.
21.500	259.7636	87.26	. Q	.	.	.	V	.
21.583	260.3564	86.07	. Q	.	.	.	V	.
21.667	260.9413	84.92	. Q	.	.	.	V	.
21.750	261.5186	83.82	. Q	.	.	.	V	.
21.833	262.0885	82.76	. Q	.	.	.	V	.
21.917	262.6514	81.73	. Q	.	.	.	V	.
22.000	263.2075	80.75	. Q	.	.	.	V	.
22.083	263.7570	79.79	. Q	.	.	.	V	.
22.167	264.3002	78.87	. Q	.	.	.	V	.
22.250	264.8372	77.98	. Q	.	.	.	V	.
22.333	265.3683	77.12	. Q	.	.	.	V	.
22.417	265.8937	76.28	. Q	.	.	.	V	.
22.500	266.4134	75.47	. Q	.	.	.	V	.
22.583	266.9278	74.68	. Q	.	.	.	V	.
22.667	267.4369	73.92	. Q	.	.	.	V	.
22.750	267.9408	73.18	. Q	.	.	.	V	.
22.833	268.4398	72.46	. Q	.	.	.	V	.
22.917	268.9341	71.76	. Q	.	.	.	V	.
23.000	269.4236	71.07	. Q	.	.	.	V	.
23.083	269.9085	70.41	. Q	.	.	.	V	.
23.167	270.3889	69.76	. Q	.	.	.	V	.
23.250	270.8651	69.13	. Q	.	.	.	V	.
23.333	271.3369	68.52	. Q	.	.	.	V	.
23.417	271.8047	67.92	. Q	.	.	.	V	.
23.500	272.2684	67.33	. Q	.	.	.	V	.
23.583	272.7282	66.76	. Q	.	.	.	V	.
23.667	273.1841	66.20	. Q	.	.	.	V	.
23.750	273.6363	65.66	. Q	.	.	.	V	.
23.833	274.0848	65.12	. Q	.	.	.	V	.
23.917	274.5297	64.60	. Q	.	.	.	V	.
24.000	274.9711	64.09	. Q	.	.	.	V	.
24.083	275.4086	63.53	. Q	.	.	.	V	.
24.167	275.8401	62.65	. Q	.	.	.	V	.
24.250	276.2650	61.70	. Q	.	.	.	V	.
24.333	276.6834	60.75	. Q	.	.	.	V	.
24.417	277.0925	59.40	. Q	.	.	.	V	.
24.500	277.4902	57.75	. Q	.	.	.	V	.
24.583	277.8755	55.95	. Q	.	.	.	V	.
24.667	278.2482	54.11	.Q	.	.	.	V	.
24.750	278.6082	52.28	.Q	.	.	.	V	.
24.833	278.9560	50.49	.Q	.	.	.	V	.
24.917	279.2917	48.74	.Q	.	.	.	V	.
25.000	279.6157	47.05	.Q	.	.	.	V	.

TIME DURATION(minutes) OF PERCENTILES OF ESTIMATED PEAK FLOW RATE:
(Note: 100% of Peak Flow Rate estimate assumed to have
an instantaneous time duration)

Percentile of Estimated Peak Flow Rate	Duration (minutes)
=====	=====

0%	1505.0
10%	540.0
20%	265.0
30%	155.0
40%	100.0
50%	80.0
60%	65.0
70%	55.0
80%	45.0
90%	30.0

=====
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, CA92707

***** DESCRIPTION OF STUDY *****
* RMV PA-4 SUBAREA E *
* UNIT HYDROGRAPH - COMPLEX MODEL *
* 100-YR EV MARCH 2019 CCHIU *

FILE NAME: 4E00EVC.DAT
TIME/DATE OF STUDY: 14:42 03/28/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 171.00
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.174
LOW LOSS FRACTION = 0.374
TIME OF CONCENTRATION (MIN.) = 9.39
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 6
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.40
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.87
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.15
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.94
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.71
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.49

FLOW PROCESS FROM NODE 809.00 TO NODE 822.00 IS CODE = 3.2

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

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

4E-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	1.520
3	2.00	1.30	3.150
4	3.00	1.60	4.900
5	4.00	1.80	6.790
6	5.00	2.10	8.810
7	6.00	2.30	10.970
8	7.00	47.90	13.270
9	8.00	131.60	15.720
10	9.00	241.70	18.320
11	10.00	372.80	21.060

FLOW PROCESS FROM NODE 822.00 TO NODE 822.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

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* AES FLOODSCx PROGRAM RESULTS SUMMARY *

| INPUT FILENAME: [4E00EVC.DAT]

Page: 1 of 1

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

810.00	809.00	Subarea (UH) Added to Stream #3	0.0	490.2
16.167		4		
809.00	822.00	Flow-Through Basin: Stream #3	490.2	232.5
16.267	18.11			
822.00	822.00	View: Stream #3		232.5
16.267	39.07	3		

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

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

| 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

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, CA92707

***** DESCRIPTION OF STUDY *****

- * RMV PA-4 SUBAREA E *
- * UNIT HYDROGRAPH - COMPLEX MODEL *
- * 2-YR EV MARCH 2019 CCHIU *

FILE NAME: 4E02EVC.DAT
TIME/DATE OF STUDY: 15:10 03/28/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 171.00
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.348
LOW LOSS FRACTION = 0.587
TIME OF CONCENTRATION (MIN.) = 10.86
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 6
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.13
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.28
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.37
3-HOUR POINT RAINFALL VALUE (INCHES) = 0.62
6-HOUR POINT RAINFALL VALUE (INCHES) = 0.85
24-HOUR POINT RAINFALL VALUE (INCHES) = 1.44

FLOW PROCESS FROM NODE 809.00 TO NODE 822.00 IS CODE = 3.2

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

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

4E-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	1.520
3	2.00	1.30	3.150
4	3.00	1.60	4.900
5	4.00	1.80	6.790
6	5.00	2.10	8.810
7	6.00	2.30	10.970
8	7.00	47.90	13.270
9	8.00	131.60	15.720
10	9.00	241.70	18.320
11	10.00	372.80	21.060

FLOW PROCESS FROM NODE 822.00 TO NODE 822.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

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* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [4E02EVC.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		

810.00	809.00	Subarea (UH) Added to Stream #3	0.0	100.5
16.183		4		
809.00	822.00	Flow-Through Basin: Stream #3	100.5	1.7
22.100	6.25			
822.00	822.00	View: Stream #3		1.7
22.100	8.11	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

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, CA92707

***** DESCRIPTION OF STUDY *****

- * RMV PA-4 SUBAREA E *
- * UNIT HYDROGRAPH - COMPLEX MODEL *
- * 5-YR EV MARCH 2019 CCHIU *

FILE NAME: 4E05EVC.DAT
TIME/DATE OF STUDY: 15:07 03/28/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
 TOTAL CATCHMENT AREA (ACRES) = 171.00
 SOIL-LOSS RATE, Fm, (INCH/HR) = 0.290
 LOW LOSS FRACTION = 0.519
 TIME OF CONCENTRATION (MIN.) = 10.33
 USER SPECIFIED RAINFALL VALUES ARE USED:
 RETURN FREQUENCY (YEARS) = 6
 5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.18
 30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.41
 1-HOUR POINT RAINFALL VALUE (INCHES) = 0.55
 3-HOUR POINT RAINFALL VALUE (INCHES) = 0.92
 6-HOUR POINT RAINFALL VALUE (INCHES) = 1.27
 24-HOUR POINT RAINFALL VALUE (INCHES) = 2.12

FLOW PROCESS FROM NODE 809.00 TO NODE 822.00 IS CODE = 3.2

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

ROUTE RUNOFF HYDROGRAPH FROM STREAM NUMBER 3
 THROUGH A FLOW-THROUGH DETENTION BASIN. 4E-1
 SPECIFIED BASIN CONDITIONS ARE AS FOLLOWS:
 DEAD STORAGE (AF) = 0.000
 SPECIFIED DEAD STORAGE (AF) FILLED = 0.000
 SPECIFIED EFFECTIVE VOLUME (AF) FILLED ABOVE OUTLET = 0.000
 DETENTION BASIN CONSTANT LOSS RATE (CFS) = 0.00

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	1.520
3	2.00	1.30	3.150
4	3.00	1.60	4.900
5	4.00	1.80	6.790
6	5.00	2.10	8.810
7	6.00	2.30	10.970
8	7.00	47.90	13.270
9	8.00	131.60	15.720
10	9.00	241.70	18.320
11	10.00	372.80	21.060

FLOW PROCESS FROM NODE 822.00 TO NODE 822.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

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* AES FLOODSCx PROGRAM RESULTS SUMMARY *

| INPUT FILENAME: [4E05EVC.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		

810.00	809.00	Subarea (UH) Added to Stream #3	0.0	179.9
16.183		4		
809.00	822.00	Flow-Through Basin: Stream #3	179.9	3.9
19.967	11.05			
822.00	822.00	View: Stream #3		3.9
19.967	13.95	3		

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

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

4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

END OF FLOODSCx ROUTING ANALYSIS

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Analysis prepared by:

Michael Baker International
5 Hutton Centre Drive Suite 500
Santa Ana, CA92707

***** DESCRIPTION OF STUDY *****
* RMV PA-4 SUBAREA E *
* UNIT HYDROGRAPH - COMPLEX MODEL *
* 10-YR EV MARCH 2019 CCHIUI *

FILE NAME: 4E10EVC.DAT
TIME/DATE OF STUDY: 14:55 03/28/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 171.00
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.174
LOW LOSS FRACTION = 0.450
TIME OF CONCENTRATION (MIN.) = 9.86
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 6
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.26
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.59
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.78
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.31
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.81
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.03

FLOW PROCESS FROM NODE 809.00 TO NODE 822.00 IS CODE = 3.2

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

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

4E-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	1.520
3	2.00	1.30	3.150
4	3.00	1.60	4.900
5	4.00	1.80	6.790
6	5.00	2.10	8.810
7	6.00	2.30	10.970
8	7.00	47.90	13.270
9	8.00	131.60	15.720
10	9.00	241.70	18.320
11	10.00	372.80	21.060

FLOW PROCESS FROM NODE 822.00 TO NODE 822.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

| INPUT FILENAME: [4E10EVC.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		

810.00	809.00	Subarea (UH) Added to Stream #3	0.0	305.4
16.167		4		
809.00	822.00	Flow-Through Basin: Stream #3	305.4	101.3
16.300	14.83			
822.00	822.00	View: Stream #3		101.3
16.300	23.46	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

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, CA92707

***** DESCRIPTION OF STUDY *****

- * RMV PA-4 SUBAREA E *
- * UNIT HYDROGRAPH - COMPLEX MODEL *
- * 25-YR EV MARCH 2019 CCHIUI *

FILE NAME: 4E25EVC.DAT
TIME/DATE OF STUDY: 08:58 03/29/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
 TOTAL CATCHMENT AREA (ACRES) = 171.00
 SOIL-LOSS RATE, Fm, (INCH/HR) = 0.174
 LOW LOSS FRACTION = 0.412
 TIME OF CONCENTRATION (MIN.) = 9.55
 USER SPECIFIED RAINFALL VALUES ARE USED:
 RETURN FREQUENCY (YEARS) = 6
 5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.34
 30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.72
 1-HOUR POINT RAINFALL VALUE (INCHES) = 0.95
 3-HOUR POINT RAINFALL VALUE (INCHES) = 1.59
 6-HOUR POINT RAINFALL VALUE (INCHES) = 2.20
 24-HOUR POINT RAINFALL VALUE (INCHES) = 3.68

FLOW PROCESS FROM NODE 809.00 TO NODE 822.00 IS CODE = 3.2

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

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

4E-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	1.520
3	2.00	1.30	3.150
4	3.00	1.60	4.900
5	4.00	1.80	6.790
6	5.00	2.10	8.810
7	6.00	2.30	10.970
8	7.00	47.90	13.270
9	8.00	131.60	15.720
10	9.00	241.70	18.320
11	10.00	372.80	21.060

FLOW PROCESS FROM NODE 822.00 TO NODE 822.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

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* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [4E25EVC.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		

810.00	809.00	Subarea (UH) Added to Stream #3	0.0	404.3
16.167		4		
809.00	822.00	Flow-Through Basin: Stream #3	404.3	176.4
16.267	16.79			
822.00	822.00	View: Stream #3		176.4
16.267	30.26	3		

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

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

4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

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, CA92707

***** DESCRIPTION OF STUDY *****

- * RMV PA-4 SUBAREA E *
- * UNIT HYDROGRAPH - COMPLEX MODEL *
- * 50-YR EV MARCH 2019 CCHIUI *

FILE NAME: 4E50EVC.DAT
TIME/DATE OF STUDY: 14:47 03/28/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 810.00 TO NODE 809.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
 TOTAL CATCHMENT AREA (ACRES) = 171.00
 SOIL-LOSS RATE, Fm, (INCH/HR) = 0.174
 LOW LOSS FRACTION = 0.391
 TIME OF CONCENTRATION (MIN.) = 9.43
 USER SPECIFIED RAINFALL VALUES ARE USED:
 RETURN FREQUENCY (YEARS) = 6
 5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.37
 30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.80
 1-HOUR POINT RAINFALL VALUE (INCHES) = 1.06
 3-HOUR POINT RAINFALL VALUE (INCHES) = 1.78
 6-HOUR POINT RAINFALL VALUE (INCHES) = 2.47
 24-HOUR POINT RAINFALL VALUE (INCHES) = 4.12

FLOW PROCESS FROM NODE 809.00 TO NODE 822.00 IS CODE = 3.2

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

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

4E-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	1.520
3	2.00	1.30	3.150
4	3.00	1.60	4.900
5	4.00	1.80	6.790
6	5.00	2.10	8.810
7	6.00	2.30	10.970
8	7.00	47.90	13.270
9	8.00	131.60	15.720
10	9.00	241.70	18.320
11	10.00	372.80	21.060

FLOW PROCESS FROM NODE 822.00 TO NODE 822.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

=====

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [4E50EVC.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		

810.00	809.00	Subarea (UH) Added to Stream #3	0.0	449.3
16.167		4		
809.00	822.00	Flow-Through Basin: Stream #3	449.3	208.2
16.267	17.53			
822.00	822.00	View: Stream #3		208.2
16.267	34.96	3		

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

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

4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

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 *****

- * RMV PA-4 SUBAREA F *
- * UNIT HYDROGRAPH - COMPLEX MODEL *
- * 100-YR EV ARPIL 2019 ROKAMOTO *

FILE NAME: 4F00EVC.DAT
TIME/DATE OF STUDY: 06:41 04/16/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 553.80
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.254
LOW LOSS FRACTION = 0.434
TIME OF CONCENTRATION (MIN.) = 16.64
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 6
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.40
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.87
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.15
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.94
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.71
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.49

FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.2

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

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

4F-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	652.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

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

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

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 | * AES FLOODSCx PROGRAM RESULTS SUMMARY *
 |

| INPUT FILENAME: [4F00EVC.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 |

-----+
 | 920.00 905.00 | Subarea (UH) Added to Stream #3 | 0.0 1084.3 |
 16.283 | | 4 |
 | 905.00 126.00 | Flow-Through Basin: Stream #3 | 1084.3 912.7 |
 16.333 | 24.36 |
 | 126.00 126.00 | View: Stream #3 | 912.7 |
 16.333 | 114.99 | 3 |

-----+
 | Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT
 INTERVAL |
 | 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
 THE DESIGN STORM |
 | 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS
 GREATER THAN 1 SQ MI |

-----+
 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 *****

- * RMV PA-4 SUBAREA F *
- * SMALL AREA HYDROGRAPH - COMPLEX MODEL *
- * 2-YR EV APRIL 2019 ROKAMOTO *

FILE NAME: 4F02EVC.DAT
TIME/DATE OF STUDY: 06:47 04/16/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
 TOTAL CATCHMENT AREA (ACRES) = 553.80
 SOIL-LOSS RATE, Fm, (INCH/HR) = 0.509
 LOW LOSS FRACTION = 0.744
 TIME OF CONCENTRATION (MIN.) = 11.43
 USER SPECIFIED RAINFALL VALUES ARE USED:
 RETURN FREQUENCY (YEARS) = 6
 5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.13
 30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.28
 1-HOUR POINT RAINFALL VALUE (INCHES) = 0.37
 3-HOUR POINT RAINFALL VALUE (INCHES) = 0.62
 6-HOUR POINT RAINFALL VALUE (INCHES) = 0.85
 24-HOUR POINT RAINFALL VALUE (INCHES) = 1.44

FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.2

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

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

4F-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	652.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

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

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

=====

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

INPUT FILENAME: [4F02EVC.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		

920.00	905.00	Subarea (UH) Added to Stream #3	0.0	230.9
16.200		4		
905.00	126.00	Flow-Through Basin: Stream #3	230.9	19.6
16.583	11.64			
126.00	126.00	View: Stream #3		19.6
16.583	16.65	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

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 *****

- * RMV PA-4 SUBAREA F *
- * SMALL AREA HYDROGRAPH - COMPLEX MODEL *
- * 5-YR EV ARPIL 2019 ROKAMOTO *

FILE NAME: 4F05EVC.DAT
TIME/DATE OF STUDY: 06:48 04/16/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 553.80
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.424
LOW LOSS FRACTION = 0.644
TIME OF CONCENTRATION (MIN.) = 10.96
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 6
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.18
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.41
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.55
3-HOUR POINT RAINFALL VALUE (INCHES) = 0.92
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.27
24-HOUR POINT RAINFALL VALUE (INCHES) = 2.12

FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.2

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

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

4F-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	652.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

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

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

=====

* AES FLOODSCx PROGRAM RESULTS SUMMARY *

| INPUT FILENAME: [4F05EVC.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		

920.00	905.00	Subarea (UH) Added to Stream #3	0.0	493.0
16.183		4		
905.00	126.00	Flow-Through Basin: Stream #3	493.0	206.5
16.317	19.04			
126.00	126.00	View: Stream #3		206.5
16.317	34.52	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

END OF FLOODSCx ROUTING ANALYSIS

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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 *****

- * RMV PA-4 SUBAREA F *
- * SMALL AREA HYDROGRAPH - COMPLEX MODEL *
- * 10-YR EV APRIL 2019 ROKAMOTO *

FILE NAME: 4F10EVC.DAT
TIME/DATE OF STUDY: 06:45 04/16/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 553.80
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.254
LOW LOSS FRACTION = 0.543
TIME OF CONCENTRATION (MIN.) = 17.80
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 6
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.26
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.59
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.78
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.31
6-HOUR POINT RAINFALL VALUE (INCHES) = 1.81
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.03

FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.2

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

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

4F-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	652.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

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

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

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* AES FLOODSCx PROGRAM RESULTS SUMMARY *

| INPUT FILENAME: [4F10EVC.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		

920.00	905.00	Subarea (UH) Added to Stream #3	0.0	654.1
16.300		4		
905.00	126.00	Flow-Through Basin: Stream #3	654.1	538.1
16.367	21.73			
126.00	126.00	View: Stream #3		538.1
16.367	64.75	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

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 *****

- * RMV PA-4 SUBAREA F *
- * SMALL AREA HYDROGRAPH - COMPLEX MODEL *
- * 25-YR EV APRIL 2019 ROKAMOTO *

FILE NAME: 4F25EVC.DAT
TIME/DATE OF STUDY: 06:44 04/16/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 553.80
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.254
LOW LOSS FRACTION = 0.488
TIME OF CONCENTRATION (MIN.) = 17.15
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 6
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.34
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.72
1-HOUR POINT RAINFALL VALUE (INCHES) = 0.95
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.59
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.20
24-HOUR POINT RAINFALL VALUE (INCHES) = 3.68

FLOW PROCESS FROM NODE 905.00 TO NODE 126.00 IS CODE = 3.2

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

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

4F-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

INTERVAL NUMBER	DEPTH (FT)	OUTFLOW (CFS)	STORAGE (AF)
1	0.00	0.00	0.000
2	1.00	0.80	2.460
3	2.00	1.30	5.020
4	3.00	1.60	7.690
5	4.00	17.00	10.460
6	5.00	23.40	13.330
7	6.00	28.50	16.310
8	7.00	230.70	19.400
9	8.00	652.80	22.600
10	9.00	1142.40	25.910
11	10.00	1723.00	29.340

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

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

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* AES FLOODSCx PROGRAM RESULTS SUMMARY *

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

920.00	905.00	Subarea (UH) Added to Stream #3	0.0	866.8
16.300		4		
905.00	126.00	Flow-Through Basin: Stream #3	866.8	720.3
16.350	23.06			
126.00	126.00	View: Stream #3		720.3
16.350	86.68	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

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, CA92707

***** DESCRIPTION OF STUDY *****

- * RMV PA-4 SUBAREA F *
- * SMALL AREA HYDROGRAPH - COMPLEX MODEL *
- * 50-YR EV MARCH 2019 CCHIUI *

FILE NAME: 4F50EVC.DAT
TIME/DATE OF STUDY: 06:35 03/29/2019

The Small Area Unit Hydrograph Procedures in Section J of the Hydrology Manual provides estimates of runoff hydrograph and runoff volume for watersheds whose time of concentration is less than 25 minutes. The PROGRAM User should check the applicability of using the small area unit hydrograph procedures, and follow the guidelines in Sections J and K.5 in complex watershed modeling.

** INPUT SUMMARY **

FLOW PROCESS FROM NODE 920.00 TO NODE 905.00 IS CODE = 1.2

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

RATIONAL METHOD CALIBRATION COEFFICIENT = 0.90
TOTAL CATCHMENT AREA (ACRES) = 553.80
SOIL-LOSS RATE, Fm, (INCH/HR) = 0.254
LOW LOSS FRACTION = 0.457
TIME OF CONCENTRATION (MIN.) = 16.81
USER SPECIFIED RAINFALL VALUES ARE USED:
RETURN FREQUENCY (YEARS) = 6
5-MINUTE POINT RAINFALL VALUE (INCHES) = 0.37
30-MINUTE POINT RAINFALL VALUE (INCHES) = 0.80
1-HOUR POINT RAINFALL VALUE (INCHES) = 1.06
3-HOUR POINT RAINFALL VALUE (INCHES) = 1.78
6-HOUR POINT RAINFALL VALUE (INCHES) = 2.47
24-HOUR POINT RAINFALL VALUE (INCHES) = 4.12

FLOW PROCESS FROM NODE 905.00 TO NODE 906.00 IS CODE = 3.2

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

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

4F-1

BASIN DEPTH VERSUS OUTFLOW AND STORAGE INFORMATION:

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

FLOW PROCESS FROM NODE 906.00 TO NODE 906.00 IS CODE = 11

>>>>VIEW STREAM NUMBER 3 HYDROGRAPH<<<<

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* AES FLOODSCx PROGRAM RESULTS SUMMARY *

| INPUT FILENAME: [4F50EVC.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		

920.00	905.00	Subarea (UH) Added to Stream #3	0.0	982.6
16.283		4		
905.00	906.00	Flow-Through Basin: Stream #3	982.6	824.9
16.333	23.89			
906.00	906.00	View: Stream #3		824.9
16.333	101.98	3		

Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 1-MINUTE UNIT INTERVAL
 3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF THE DESIGN STORM
 4 = SMALL AREA UNIT HYDROGRAPH USED; 5 = TOTAL WATERSHED AREA IS GREATER THAN 1 SQ MI

END OF FLOODSCx ROUTING ANALYSIS