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

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




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 BODR 2022 - NODE 133C                                        *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 100-YR EV DEC 2022 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0033CS.DAT
  TIME/DATE OF STUDY: 13:20 12/12/2022


                        ** INPUT SUMMARY **


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==============================================================================
  WATERSHED AREA =   60992.301 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.284 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.287; LOW LOSS FRACTION = 0.393
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.49; 30-MINUTE =  0.94;  1-HOUR =  1.29
    3-HOUR =  2.38;    6-HOUR =  3.53; 24-HOUR =  6.16
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936
==============================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0033CS.DAT   ]
Page:   1 of    |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                 | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0     21745.3|
17.917 |             |           |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 100-YR EV OCT 2022 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0033TS.DAT
  TIME/DATE OF STUDY: 09:30 10/25/2022


**************************************************************************
  FLOW PROCESS FROM NODE  13010.00 TO NODE    133.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    6638.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.116 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.239
         LOW LOSS FRACTION = 0.476
         *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 = 0.744
          30-MINUTE FACTOR = 0.744
           1-HOUR FACTOR = 0.744
           3-HOUR FACTOR = 0.959
           6-HOUR FACTOR = 0.978
          24-HOUR FACTOR = 0.987

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   7.467
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.427	342.553
2	1.280	685.106
3	2.229	762.111
4	3.509	1027.377
5	5.502	1599.999
6	8.621	2504.003
7	12.399	3032.579
8	16.865	3585.811
9	21.237	3509.774
10	26.110	3912.031
11	31.190	4078.309
12	36.907	4589.272
13	43.262	5102.404
14	50.322	5667.487
15	55.961	4527.264
16	62.428	5191.375
17	68.056	4518.263
18	72.986	3957.755
19	77.161	3351.742
20	80.533	2707.227
21	83.792	2616.664
22	86.533	2200.585
23	88.645	1695.204
24	90.357	1374.503
25	91.920	1254.656
26	93.364	1159.009
27	94.524	931.805
28	95.473	761.195
29	96.259	631.738
30	96.846	470.573
31	97.431	470.156
32	97.955	420.183
33	98.144	152.027
34	98.284	112.552
35	98.424	112.129
36	98.564	112.344
37	98.704	112.552
38	98.844	112.344
39	98.984	112.337
40	99.124	112.344
41	99.264	112.337
42	99.404	112.337
43	99.544	112.337
44	99.684	112.337
45	99.823	112.337
46	99.963	112.337
47	100.000	29.375

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1051.6797

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1397.8690

==========

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.	975.0	1950.0	2925.0	3900.0
0.083	0.0070	1.02	Q	.	.	.	.
0.167	0.0282	3.07	Q	.	.	.	.
0.250	0.0651	5.36	Q	.	.	.	.
0.333	0.1233	8.44	Q	.	.	.	.
0.417	0.2145	13.25	Q	.	.	.	.
0.500	0.3575	20.77	Q	.	.	.	.
0.583	0.5634	29.89	Q	.	.	.	.
0.667	0.8437	40.70	Q	.	.	.	.
0.750	1.1971	51.31	Q	.	.	.	.
0.833	1.6322	63.17	Q	.	.	.	.
0.917	2.1525	75.55	Q	.	.	.	.
1.000	2.7690	89.51	Q	.	.	.	.
1.083	3.4924	105.04	VQ	.	.	.	.
1.167	4.3348	122.32	VQ	.	.	.	.
1.250	5.2732	136.25	VQ	.	.	.	.
1.333	6.3214	152.21	VQ	.	.	.	.
1.417	7.4661	166.21	VQ	.	.	.	.
1.500	8.6961	178.60	VQ	.	.	.	.
1.583	9.9992	189.21	VQ	.	.	.	.
1.667	11.3625	197.94	V Q	.	.	.	.
1.750	12.7841	206.43	V Q	.	.	.	.
1.833	14.2560	213.71	V Q	.	.	.	.
1.917	15.7677	219.51	V Q	.	.	.	.
2.000	17.3131	224.38	V Q	.	.	.	.
2.083	18.8895	228.90	V Q	.	.	.	.
2.167	20.4954	233.17	V Q	.	.	.	.
2.250	22.1261	236.77	V Q	.	.	.	.
2.333	23.7782	239.89	V Q	.	.	.	.
2.417	25.4491	242.62	V Q	.	.	.	.
2.500	27.1357	244.90	V Q	.	.	.	.
2.583	28.8381	247.18	V Q	.	.	.	.
2.667	30.5552	249.33	V Q	.	.	.	.
2.750	32.2817	250.68	V Q	.	.	.	.
2.833	34.0168	251.94	V Q	.	.	.	.
2.917	35.7606	253.20	.VQ	.	.	.	.
3.000	37.5132	254.47	.VQ	.	.	.	.
3.083	39.2745	255.75	.VQ	.	.	.	.
3.167	41.0448	257.05	.VQ	.	.	.	.
3.250	42.8240	258.34	.VQ	.	.	.	.
3.333	44.6123	259.66	.VQ	.	.	.	.
3.417	46.4097	260.98	.VQ	.	.	.	.
3.500	48.2163	262.32	.VQ	.	.	.	.
3.583	50.0321	263.65	.VQ	.	.	.	.
3.667	51.8573	265.02	.VQ	.	.	.	.
3.750	53.6918	266.38	.VQ	.	.	.	.
3.833	55.5359	267.77	.VQ	.	.	.	.
3.917	57.3879	268.90	.VQ	.	.	.	.

4.000	59.2472	269.98	.VQ	.	.	.	.
4.083	61.1139	271.05	.VQ	.	.	.	.
4.167	62.9882	272.14	.VQ	.	.	.	.
4.250	64.8700	273.24	.VQ	.	.	.	.
4.333	66.7595	274.36	.VQ	.	.	.	.
4.417	68.6567	275.47	.VQ	.	.	.	.
4.500	70.5618	276.62	. Q	.	.	.	.
4.583	72.4747	277.76	. Q	.	.	.	.
4.667	74.3956	278.93	. Q	.	.	.	.
4.750	76.3246	280.09	. Q	.	.	.	.
4.833	78.2619	281.28	. Q	.	.	.	.
4.917	80.2073	282.47	. Q	.	.	.	.
5.000	82.1611	283.70	. Q	.	.	.	.
5.083	84.1233	284.91	. Q	.	.	.	.
5.167	86.0941	286.16	. Q	.	.	.	.
5.250	88.0735	287.41	. Q	.	.	.	.
5.333	90.0617	288.68	. Q	.	.	.	.
5.417	92.0586	289.96	. Q	.	.	.	.
5.500	94.0646	291.26	. Q	.	.	.	.
5.583	96.0795	292.57	. VQ	.	.	.	.
5.667	98.1036	293.91	. VQ	.	.	.	.
5.750	100.1370	295.24	. VQ	.	.	.	.
5.833	102.1798	296.61	. VQ	.	.	.	.
5.917	104.2319	297.98	. VQ	.	.	.	.
6.000	106.2938	299.38	. Q	.	.	.	.
6.083	108.3653	300.78	. Q	.	.	.	.
6.167	110.4467	302.22	. Q	.	.	.	.
6.250	112.5380	303.65	. Q	.	.	.	.
6.333	114.6394	305.13	. Q	.	.	.	.
6.417	116.7510	306.60	. Q	.	.	.	.
6.500	118.8729	308.11	. Q	.	.	.	.
6.583	121.0053	309.62	. Q	.	.	.	.
6.667	123.1484	311.17	. Q	.	.	.	.
6.750	125.3021	312.72	. Q	.	.	.	.
6.833	127.4667	314.31	. Q	.	.	.	.
6.917	129.6424	315.90	. Q	.	.	.	.
7.000	131.8292	317.53	. Q	.	.	.	.
7.083	134.0274	319.17	. Q	.	.	.	.
7.167	136.2370	320.85	. Q	.	.	.	.
7.250	138.4583	322.52	. Q	.	.	.	.
7.333	140.6914	324.25	. QV	.	.	.	.
7.417	142.9363	325.97	. QV	.	.	.	.
7.500	145.1935	327.74	. QV	.	.	.	.
7.583	147.4629	329.52	. QV	.	.	.	.
7.667	149.7449	331.34	. QV	.	.	.	.
7.750	152.0394	333.17	. QV	.	.	.	.
7.833	154.3469	335.04	. QV	.	.	.	.
7.917	156.6673	336.92	. QV	.	.	.	.
8.000	159.0009	338.85	. QV	.	.	.	.
8.083	161.3480	340.79	. QV	.	.	.	.
8.167	163.7087	342.78	. QV	.	.	.	.
8.250	166.0832	344.77	. QV	.	.	.	.
8.333	168.4718	346.82	. QV	.	.	.	.
8.417	170.8745	348.88	. QV	.	.	.	.
8.500	173.2919	351.00	. QV	.	.	.	.
8.583	175.7238	353.12	. Q V	.	.	.	.
8.667	178.1708	355.30	. Q V	.	.	.	.
8.750	180.6328	357.49	. Q V	.	.	.	.

8.833	183.1104	359.75	. Q V	.	.	.	.
8.917	185.6036	362.01	. Q V	.	.	.	.
9.000	188.1128	364.34	. Q V	.	.	.	.
9.083	190.6382	366.68	. Q V	.	.	.	.
9.167	193.1801	369.09	. Q V	.	.	.	.
9.250	195.7387	371.51	. Q V	.	.	.	.
9.333	198.3145	374.00	. Q V	.	.	.	.
9.417	200.9075	376.50	. Q V	.	.	.	.
9.500	203.5183	379.09	. Q V	.	.	.	.
9.583	206.1469	381.68	. Q V	.	.	.	.
9.667	208.7941	384.36	. Q V	.	.	.	.
9.750	211.4597	387.05	. Q V	.	.	.	.
9.833	214.1444	389.83	. Q V	.	.	.	.
9.917	216.8484	392.62	. Q V	.	.	.	.
10.000	219.5722	395.50	. Q V	.	.	.	.
10.083	222.3160	398.40	. Q V	.	.	.	.
10.167	225.0804	401.39	. Q V	.	.	.	.
10.250	227.8655	404.40	. Q V	.	.	.	.
10.333	230.6721	407.52	. Q V	.	.	.	.
10.417	233.5003	410.65	. Q V	.	.	.	.
10.500	236.3508	413.90	. Q V	.	.	.	.
10.583	239.2238	417.16	. Q V	.	.	.	.
10.667	242.1201	420.54	. Q V	.	.	.	.
10.750	245.0399	423.94	. Q V	.	.	.	.
10.833	247.9839	427.47	. Q V	.	.	.	.
10.917	250.9523	431.02	. Q V	.	.	.	.
11.000	253.9462	434.71	. Q V	.	.	.	.
11.083	256.9656	438.42	. Q V	.	.	.	.
11.167	260.0115	442.27	. Q V	.	.	.	.
11.250	263.0842	446.15	. Q V	.	.	.	.
11.333	266.1847	450.19	. Q V	.	.	.	.
11.417	269.3131	454.26	. Q V	.	.	.	.
11.500	272.4707	458.48	. Q V	.	.	.	.
11.583	275.6577	462.75	. Q V	.	.	.	.
11.667	278.8753	467.19	. Q V	.	.	.	.
11.750	282.1238	471.68	. Q V	.	.	.	.
11.833	285.4044	476.35	. Q V	.	.	.	.
11.917	288.7176	481.07	. Q V	.	.	.	.
12.000	292.0646	485.99	. Q V	.	.	.	.
12.083	295.4523	491.90	. Q V	.	.	.	.
12.167	298.8887	498.96	. Q V	.	.	.	.
12.250	302.3755	506.29	. Q V	.	.	.	.
12.333	305.9196	514.59	. Q V	.	.	.	.
12.417	309.5320	524.53	. Q V	.	.	.	.
12.500	313.2316	537.18	. Q V	.	.	.	.
12.583	317.0290	551.38	. Q V.	.	.	.	.
12.667	320.9366	567.38	. Q V.	.	.	.	.
12.750	324.9537	583.29	. Q V.	.	.	.	.
12.833	329.0902	600.62	. Q V.	.	.	.	.
12.917	333.3501	618.53	. Q V.	.	.	.	.
13.000	337.7453	638.19	. Q V.	.	.	.	.
13.083	342.2866	659.40	. Q V.	.	.	.	.
13.167	346.9872	682.54	. Q V.	.	.	.	.
13.250	351.8271	702.75	. Q V	.	.	.	.
13.333	356.8216	725.20	. Q V	.	.	.	.
13.417	361.9594	746.01	. Q V	.	.	.	.
13.500	367.2332	765.76	. Q V	.	.	.	.
13.583	372.6332	784.08	. Q V	.	.	.	.

13.667	378.1508	801.15	. Q V . . .
13.750	383.7859	818.22	. Q V . . .
13.833	389.5346	834.71	. Q .V . . .
13.917	395.3892	850.09	. Q .V . . .
14.000	401.3481	865.23	. Q .V . . .
14.083	407.4236	882.16	. Q.V . . .
14.167	413.6311	901.34	. Q.V . . .
14.250	419.9716	920.63	. Q. V . . .
14.333	426.4566	941.62	. Q. V . . .
14.417	433.1072	965.67	. Q. V . . .
14.500	439.9590	994.88	. Q V . . .
14.583	447.0338	1027.27	. Q V . . .
14.667	454.3570	1063.32	. Q V . . .
14.750	461.9234	1098.65	. .Q V . . .
14.833	469.7540	1136.99	. .Q V . . .
14.917	477.8595	1176.93	. . QV . . .
15.000	486.2684	1220.97	. . QV . . .
15.083	495.0063	1268.75	. . QV . . .
15.167	504.1066	1321.35	. . QV . . .
15.250	513.5391	1369.60	. . Q . . .
15.333	523.3484	1424.31	. . Q . . .
15.417	533.4922	1472.89	. . Q . . .
15.500	543.9410	1517.15	. . Q . . .
15.583	554.6876	1560.42	. . VQ . . .
15.667	565.7162	1601.35	. . Q . . .
15.750	577.0098	1639.83	. . Q . . .
15.833	588.5276	1672.38	. . VQ . . .
15.917	600.2906	1707.99	. . Q . . .
16.000	612.4019	1758.55	. . VQ . . .
16.083	625.4604	1896.10	. . V Q. . .
16.167	639.4840	2036.22	. . V Q . .
16.250	654.1524	2129.85	. . V .Q . .
16.333	669.8816	2283.88	. . V. Q . .
16.417	687.2117	2516.33	. . V. Q . .
16.500	706.5404	2806.54	. . V Q . .
16.583	727.2323	3004.47	. . V Q .
16.667	749.0294	3164.94	. . .V . Q .
16.750	771.0418	3196.20	. . . V . Q .
16.833	794.0703	3343.74	. . . V . Q .
16.917	817.8479	3452.51	. . . V . Q .
17.000	842.9398	3643.35	. . . V . Q .
17.083	868.9985	3783.73	. . . V . Q .
17.167	895.6933	3876.08	. . . V . Q.
17.250	920.4733	3598.05	. . . V . Q .
17.333	945.7007	3663.02	. . . V . Q .
17.417	969.3187	3429.33	. . . V . Q .
17.500	991.3289	3195.88	. . . V . Q .
17.583	1011.5753	2939.78	. . . V Q .
17.667	1030.1960	2703.73	. . . Q V. .
17.750	1047.9673	2580.39	. . . Q V. .
17.833	1064.3850	2383.86	. . . Q V .
17.917	1079.3196	2168.49	. . . Q V .
18.000	1093.1055	2001.71	. . Q .V .
18.083	1106.1342	1891.76	. . Q. .V .
18.167	1118.4055	1781.80	. . Q . . V .
18.250	1129.7507	1647.32	. . Q . . V .
18.333	1140.2366	1522.54	. . Q . . V .
18.417	1149.9784	1414.52	. . Q . . V .

18.500	1158.9962	1309.39	. . Q . . V .
18.583	1167.5298	1239.08	. . Q . . V .
18.667	1175.4996	1157.23	. .Q . . V .
18.750	1182.6360	1036.21	. Q . . V .
18.833	1189.3345	972.62	. Q. . . V .
18.917	1195.7305	928.69	. Q. . . V .
19.000	1201.8484	888.33	. Q. . . V .
19.083	1207.6710	845.44	. Q . . . V .
19.167	1213.2008	802.92	. Q . . . V .
19.250	1218.4878	767.67	. Q . . . V .
19.333	1223.5388	733.42	. Q . . . V .
19.417	1228.3785	702.72	. Q . . . V .
19.500	1233.0288	675.23	. Q . . . V .
19.583	1237.5017	649.46	. Q . . . V .
19.667	1241.8113	625.74	. Q . . . V .
19.750	1245.9601	602.41	. Q . . . V .
19.833	1249.9420	578.18	. Q . . . V .
19.917	1253.6549	539.11	. Q . . . V .
20.000	1257.2031	515.19	. Q . . . V .
20.083	1260.6521	500.79	. Q . . . V .
20.167	1264.0137	488.11	. Q . . . V .
20.250	1267.2887	475.54	. Q . . . V .
20.333	1270.4822	463.70	. Q . . . V .
20.417	1273.6010	452.84	. Q . . . V .
20.500	1276.6517	442.97	. Q . . . V .
20.583	1279.6376	433.55	. Q . . . V .
20.667	1282.5620	424.63	. Q . . . V .
20.750	1285.4323	416.76	. Q . . . V .
20.833	1288.2511	409.30	. Q . . . V .
20.917	1291.0236	402.56	. Q . . . V .
21.000	1293.7524	396.24	. Q . . . V .
21.083	1296.4395	390.15	. Q . . . V .
21.167	1299.0862	384.30	. Q . . . V .
21.250	1301.6941	378.66	. Q . . . V .
21.333	1304.2645	373.22	. Q . . . V .
21.417	1306.7987	367.97	. Q . . . V .
21.500	1309.2980	362.89	. Q . . . V .
21.583	1311.7634	357.98	. Q . . . V .
21.667	1314.1960	353.22	. Q . . . V .
21.750	1316.5969	348.61	. Q . . . V .
21.833	1318.9670	344.14	. Q . . . V .
21.917	1321.3088	340.03	. Q . . . V .
22.000	1323.6237	336.12	. Q . . . V .
22.083	1325.9125	332.33	. Q . . . V .
22.167	1328.1759	328.65	. Q . . . V .
22.250	1330.4147	325.08	. Q . . . V .
22.333	1332.6296	321.61	. Q . . . V .
22.417	1334.8213	318.23	. Q . . . V .
22.500	1336.9904	314.95	. Q . . . V .
22.583	1339.1375	311.75	. Q . . . V .
22.667	1341.2631	308.64	. Q . . . V .
22.750	1343.3678	305.61	. Q . . . V .
22.833	1345.4523	302.66	. Q . . . V .
22.917	1347.5168	299.78	. Q . . . V .
23.000	1349.5621	296.98	. Q . . . V .
23.083	1351.5885	294.24	. Q . . . V .
23.167	1353.5966	291.56	. Q . . . V .
23.250	1355.5865	288.95	. Q . . . V .

23.333	1357.5590	286.40	. Q	.	.	.	V .
23.417	1359.5143	283.91	. Q	.	.	.	V .
23.500	1361.4528	281.47	. Q	.	.	.	V .
23.583	1363.3749	279.09	. Q	.	.	.	V.
23.667	1365.2810	276.76	. Q	.	.	.	V.
23.750	1367.1714	274.49	. Q	.	.	.	V.
23.833	1369.0464	272.25	. Q	.	.	.	V.
23.917	1370.9064	270.07	. Q	.	.	.	V.
24.000	1372.7516	267.93	. Q	.	.	.	V.
24.083	1374.5754	264.82	. Q	.	.	.	V.
24.167	1376.3711	260.73	. Q	.	.	.	V.
24.250	1378.1375	256.47	. Q	.	.	.	V.
24.333	1379.8693	251.47	. Q	.	.	.	V.
24.417	1381.5553	244.82	. Q	.	.	.	V.
24.500	1383.1775	235.54	. Q	.	.	.	V.
24.583	1384.7255	224.77	. Q	.	.	.	V.
24.667	1386.1886	212.45	. Q	.	.	.	V.
24.750	1387.5691	200.45	. Q	.	.	.	V.
24.833	1388.8594	187.35	.Q	.	.	.	V.
24.917	1390.0566	173.85	.Q	.	.	.	V.
25.000	1391.1512	158.93	.Q	.	.	.	V.
25.083	1392.1333	142.60	.Q	.	.	.	V.
25.167	1392.9922	124.70	.Q	.	.	.	V.
25.250	1393.7521	110.33	.Q	.	.	.	V.
25.333	1394.4000	94.09	Q	.	.	.	V.
25.417	1394.9507	79.96	Q	.	.	.	V.
25.500	1395.4163	67.60	Q	.	.	.	V.
25.583	1395.8098	57.14	Q	.	.	.	V.
25.667	1396.1450	48.67	Q	.	.	.	V.
25.750	1396.4242	40.53	Q	.	.	.	V.
25.833	1396.6562	33.69	Q	.	.	.	V.
25.917	1396.8518	28.40	Q	.	.	.	V.
26.000	1397.0178	24.10	Q	.	.	.	V.
26.083	1397.1569	20.20	Q	.	.	.	V.
26.167	1397.2712	16.60	Q	.	.	.	V.
26.250	1397.3656	13.71	Q	.	.	.	V.
26.333	1397.4437	11.34	Q	.	.	.	V.
26.417	1397.5083	9.38	Q	.	.	.	V.
26.500	1397.5627	7.91	Q	.	.	.	V.
26.583	1397.6072	6.45	Q	.	.	.	V.
26.667	1397.6427	5.16	Q	.	.	.	V.
26.750	1397.6748	4.67	Q	.	.	.	V.
26.833	1397.7045	4.30	Q	.	.	.	V.
26.917	1397.7316	3.93	Q	.	.	.	V.
27.000	1397.7562	3.57	Q	.	.	.	V.
27.083	1397.7783	3.21	Q	.	.	.	V.
27.167	1397.7980	2.85	Q	.	.	.	V.
27.250	1397.8152	2.50	Q	.	.	.	V.
27.333	1397.8300	2.15	Q	.	.	.	V.
27.417	1397.8424	1.80	Q	.	.	.	V.
27.500	1397.8524	1.45	Q	.	.	.	V.
27.583	1397.8601	1.11	Q	.	.	.	V.
27.667	1397.8654	0.77	Q	.	.	.	V.
27.750	1397.8683	0.43	Q	.	.	.	V.
27.833	1397.8689	0.09	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%	1670.0
10%	680.0
20%	340.0
30%	225.0
40%	165.0
50%	115.0
60%	90.0
70%	70.0
80%	55.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

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




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 BODR 2022 - NODE 133U                                        *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 100-YR EV DEC 2022 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0033US.DAT
  TIME/DATE OF STUDY: 13:19 12/12/2022


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   54354.000 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.284 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.293
         LOW LOSS FRACTION = 0.384
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.50
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.94
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.31
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.44
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.63
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.36

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.328
          30-MINUTE FACTOR = 0.381
           1-HOUR FACTOR = 0.422
           3-HOUR FACTOR = 0.771
           6-HOUR FACTOR = 0.897
          24-HOUR FACTOR = 0.940

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.649
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.208	1370.493
2	0.625	2740.990
3	1.042	2740.986
4	1.459	2740.990
5	1.881	2770.628
6	2.446	3717.548
7	3.081	4171.065
8	3.716	4175.753
9	4.644	6099.310
10	5.833	7813.783
11	7.289	9570.222
12	9.045	11542.081
13	10.929	12384.404
14	12.753	11991.832
15	14.934	14334.364
16	17.228	15083.957
17	19.175	12800.391
18	21.416	14725.149
19	24.064	17410.805
20	26.227	14216.126
21	28.488	14861.498
22	31.141	17444.004
23	34.214	20197.727
24	36.791	16941.350
25	39.597	18441.150
26	42.983	22256.465
27	46.321	21946.152
28	50.092	24789.584
29	52.897	18434.557
30	55.439	16708.799
31	58.279	18671.621
32	61.795	23108.686
33	64.831	19961.539
34	67.305	16258.363
35	69.980	17584.516
36	72.245	14890.436
37	74.564	15244.053
38	76.581	13262.071
39	78.209	10698.636
40	79.838	10707.813
41	81.533	11140.670
42	83.123	10450.086
43	84.596	9682.971
44	85.954	8929.046
45	87.111	7607.758
46	88.168	6944.457
47	89.037	5717.203
48	89.889	5600.250

49	90.675	5163.934
50	91.443	5049.538
51	92.189	4904.350
52	92.886	4580.673
53	93.581	4569.239
54	94.183	3955.136
55	94.647	3052.612
56	95.111	3047.346
57	95.574	3045.541
58	96.007	2848.496
59	96.309	1982.884
60	96.596	1882.581
61	96.882	1880.826
62	97.168	1880.826
63	97.454	1880.776
64	97.740	1880.826
65	97.988	1631.022
66	98.075	570.020
67	98.143	448.654
68	98.212	450.409
69	98.280	450.409
70	98.349	450.409
71	98.417	446.899
72	98.485	446.899
73	98.553	450.409
74	98.622	450.409
75	98.690	450.409
76	98.759	450.409
77	98.827	446.899
78	98.895	450.409
79	98.964	450.409
80	99.032	446.899
81	99.100	446.899
82	99.168	446.899
83	99.236	446.899
84	99.304	446.899
85	99.372	446.899
86	99.440	446.899
87	99.508	446.899
88	99.576	446.899
89	99.644	446.899
90	99.712	446.899
91	99.780	446.899
92	99.848	446.899
93	99.916	446.899
94	99.984	446.899
95	100.000	108.227

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 10220.0986

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 16842.6719

==========

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. 5150.0 10300.0 15450.0 20600.0
0.083	0.0529	7.68	Q . . . .
0.167	0.2117	23.06	Q . . . .
0.250	0.4767	38.48	Q . . . .
0.333	0.8483	53.95	Q . . . .
0.417	1.3278	69.63	Q . . . .
0.500	1.9522	90.66	Q . . . .
0.583	2.7394	114.30	Q . . . .
0.667	3.6900	138.03	Q . . . .
0.750	4.8788	172.62	Q . . . .
0.833	6.3726	216.90	Q . . . .
0.917	8.2402	271.17	Q . . . .
1.000	10.5586	336.64	Q . . . .
1.083	13.3618	407.02	Q . . . .
1.167	16.6361	475.42	Q . . . .
1.250	20.4732	557.16	VQ . . . .
1.333	24.9039	643.33	VQ . . . .
1.417	29.8417	716.97	VQ . . . .
1.500	35.3626	801.64	VQ . . . .
1.583	41.5720	901.60	VQ . . . .
1.667	48.3485	983.96	VQ . . . .
1.750	55.7192	1070.22	V Q . . . .
1.833	63.7853	1171.20	V Q . . . .
1.917	72.6554	1287.93	V Q . . . .
2.000	82.2060	1386.76	V Q . . . .
2.083	92.4977	1494.35	V Q . . . .
2.167	103.6795	1623.60	V Q . . . .
2.250	115.7426	1751.56	V Q . . . .
2.333	128.7992	1895.83	V Q . . . .
2.417	142.6074	2004.95	V Q . . . .
2.500	157.1030	2104.77	V Q . . . .
2.583	172.3641	2215.91	V Q . . . .
2.667	188.5645	2352.29	V Q . . . .
2.750	205.5854	2471.44	V Q . . . .
2.833	223.2870	2570.27	V Q . . . .
2.917	241.7226	2676.86	V Q . . . .
3.000	260.7909	2768.71	V Q . . . .
3.083	280.5077	2862.87	V Q . . . .
3.167	300.7986	2946.25	V Q . . . .
3.250	321.5670	3015.57	V Q . . . .
3.333	342.8150	3085.21	V Q . . . .
3.417	364.5611	3157.53	V Q . . . .
3.500	386.7805	3226.25	V Q . . . .
3.583	409.4454	3290.95	V Q . . . .
3.667	432.5286	3351.67	.V Q . . . .
3.750	455.9807	3405.24	.V Q . . . .
3.833	479.7776	3455.32	.V Q . . . .
3.917	503.8736	3498.74	.V Q . . . .

4.000	528.2656	3541.71	.V	Q	.	.	.	.
4.083	552.9379	3582.43	.V	Q	.	.	.	.
4.167	577.8877	3622.70	.V	Q	.	.	.	.
4.250	603.1105	3662.36	.V	Q	.	.	.	.
4.333	628.5954	3700.41	.V	Q	.	.	.	.
4.417	654.3431	3738.57	.V	Q	.	.	.	.
4.500	680.3314	3773.50	.V	Q	.	.	.	.
4.583	706.5267	3803.55	.V	Q	.	.	.	.
4.667	732.9300	3833.76	.V	Q	.	.	.	.
4.750	759.5425	3864.13	.V	Q	.	.	.	.
4.833	786.3578	3893.58	.V	Q	.	.	.	.
4.917	813.3437	3918.35	.V	Q	.	.	.	.
5.000	840.4976	3942.74	.V	Q	.	.	.	.
5.083	867.8204	3967.28	. V	Q	.	.	.	.
5.167	895.3135	3992.00	. V	Q	.	.	.	.
5.250	922.9780	4016.88	. V	Q	.	.	.	.
5.333	950.8151	4041.94	. V	Q	.	.	.	.
5.417	978.8163	4065.78	. V	Q	.	.	.	.
5.500	1006.9420	4083.86	. V	Q	.	.	.	.
5.583	1035.1887	4101.42	. V	Q	.	.	.	.
5.667	1063.5575	4119.15	. V	Q	.	.	.	.
5.750	1092.0496	4137.05	. V	Q	.	.	.	.
5.833	1120.6660	4155.12	. V	Q	.	.	.	.
5.917	1149.4080	4173.33	. V	Q	.	.	.	.
6.000	1178.2766	4191.73	. V	Q	.	.	.	.
6.083	1207.2733	4210.32	. V	Q	.	.	.	.
6.167	1236.3993	4229.10	. V	Q	.	.	.	.
6.250	1265.6559	4248.05	. V	Q	.	.	.	.
6.333	1295.0443	4267.20	. V	Q	.	.	.	.
6.417	1324.5658	4286.52	. V	Q	.	.	.	.
6.500	1354.2218	4306.05	. V	Q	.	.	.	.
6.583	1384.0137	4325.77	. V	Q	.	.	.	.
6.667	1413.9426	4345.68	. V	Q	.	.	.	.
6.750	1444.0101	4365.80	. V	Q	.	.	.	.
6.833	1474.2177	4386.13	. V	Q	.	.	.	.
6.917	1504.5665	4406.66	. V	Q	.	.	.	.
7.000	1535.0583	4427.41	. V	Q	.	.	.	.
7.083	1565.6946	4448.38	. V	Q	.	.	.	.
7.167	1596.4768	4469.58	. V	Q	.	.	.	.
7.250	1627.4066	4491.01	. V	Q	.	.	.	.
7.333	1658.4856	4512.67	. V	Q	.	.	.	.
7.417	1689.7155	4534.57	. V	Q	.	.	.	.
7.500	1721.0978	4556.72	. V	Q	.	.	.	.
7.583	1752.6344	4579.11	. V	Q	.	.	.	.
7.667	1784.3269	4601.76	. V	Q	.	.	.	.
7.750	1816.1771	4624.66	. V	Q	.	.	.	.
7.833	1848.1870	4647.83	. V	Q.	.	.	.	.
7.917	1880.3452	4669.37	. V	Q.	.	.	.	.
8.000	1912.6494	4690.57	. V	Q.	.	.	.	.
8.083	1945.1016	4712.04	. V	Q.	.	.	.	.
8.167	1977.7035	4733.80	. V	Q.	.	.	.	.
8.250	2010.4572	4755.84	. V	Q.	.	.	.	.
8.333	2043.3646	4778.17	. V	Q.	.	.	.	.
8.417	2076.4280	4800.79	. V	Q.	.	.	.	.
8.500	2109.6492	4823.73	. V	Q.	.	.	.	.
8.583	2143.0305	4846.97	. V	Q.	.	.	.	.
8.667	2176.5742	4870.53	. V	Q.	.	.	.	.
8.750	2210.2822	4894.42	. V	Q.	.	.	.	.

8.833	2244.1572	4918.64	.	V	Q.	.	.	.
8.917	2278.2014	4943.20	.	V	Q.	.	.	.
9.000	2312.4170	4968.11	.	V	Q.	.	.	.
9.083	2346.8066	4993.37	.	V	Q.	.	.	.
9.167	2381.3728	5019.01	.	V	Q.	.	.	.
9.250	2416.1182	5045.02	.	V	Q.	.	.	.
9.333	2451.0452	5071.41	.	V	Q.	.	.	.
9.417	2486.1567	5098.19	.	V	Q.	.	.	.
9.500	2521.4556	5125.39	.	V	Q.	.	.	.
9.583	2556.9446	5152.99	.	V	Q	.	.	.
9.667	2592.6265	5181.02	.	V	Q	.	.	.
9.750	2628.5044	5209.47	.	V	Q	.	.	.
9.833	2664.5813	5238.38	.	V	Q	.	.	.
9.917	2700.8606	5267.75	.	V	Q	.	.	.
10.000	2737.3455	5297.59	.	V	Q	.	.	.
10.083	2774.0391	5327.90	.	V	Q	.	.	.
10.167	2810.9448	5358.72	.	V	Q	.	.	.
10.250	2848.0664	5390.05	.	V	Q	.	.	.
10.333	2885.4072	5421.90	.	V	Q	.	.	.
10.417	2922.9712	5454.28	.	V	Q	.	.	.
10.500	2960.7620	5487.23	.	V	Q	.	.	.
10.583	2998.7837	5520.74	.	V	Q	.	.	.
10.667	3037.0403	5554.84	.	V	Q	.	.	.
10.750	3075.5359	5589.55	.	V	Q	.	.	.
10.833	3114.2747	5624.88	.	V	Q	.	.	.
10.917	3153.2612	5660.85	.	V	Q	.	.	.
11.000	3192.5000	5697.48	.	V	.Q	.	.	.
11.083	3231.9958	5734.80	.	V	.Q	.	.	.
11.167	3271.7534	5772.81	.	V	.Q	.	.	.
11.250	3311.7778	5811.56	.	V	.Q	.	.	.
11.333	3352.0742	5851.05	.	V	.Q	.	.	.
11.417	3392.6479	5891.32	.	V	.Q	.	.	.
11.500	3433.5046	5932.39	.	V	.Q	.	.	.
11.583	3474.6499	5974.28	.	V	.Q	.	.	.
11.667	3516.0896	6017.03	.	V	.Q	.	.	.
11.750	3557.8298	6060.67	.	V	.Q	.	.	.
11.833	3599.8770	6105.23	.	V	.Q	.	.	.
11.917	3642.2373	6150.73	.	V	.Q	.	.	.
12.000	3684.9180	6197.22	.	V	. Q	.	.	.
12.083	3728.0188	6258.26	.	V	. Q	.	.	.
12.167	3771.6401	6333.82	.	V	. Q	.	.	.
12.250	3815.7886	6410.36	.	V.	Q	.	.	.
12.333	3860.4709	6487.88	.	V.	Q	.	.	.
12.417	3905.6965	6566.74	.	V.	Q	.	.	.
12.500	3951.5369	6656.02	.	V.	Q	.	.	.
12.583	3998.0303	6750.86	.	V.	Q	.	.	.
12.667	4045.1848	6846.82	.	V.	Q	.	.	.
12.750	4093.1387	6962.92	.	V.	Q	.	.	.
12.833	4142.0161	7097.02	.	V.	Q	.	.	.
12.917	4191.9438	7249.52	.	V.	Q	.	.	.
13.000	4243.0630	7422.50	.	V	Q	.	.	.
13.083	4295.4375	7604.75	.	V	Q	.	.	.
13.167	4349.0469	7784.07	.	V	Q	.	.	.
13.250	4404.0571	7987.52	.	V	Q	.	.	.
13.333	4460.5264	8199.33	.	V	Q	.	.	.
13.417	4518.3057	8389.54	.	V	Q	.	.	.
13.500	4577.5332	8599.81	.	V	Q	.	.	.
13.583	4638.3989	8837.68	.	.V	Q	.	.	.

13.667	4700.6924	9045.00	. .V Q . . .
13.750	4764.4653	9259.82	. .V Q . . .
13.833	4829.9019	9501.37	. .V Q . . .
13.917	4897.1968	9771.22	. .V Q . . .
14.000	4966.1367	10010.06	. .V Q. . .
14.083	5036.9287	10278.97	. .V Q. . .
14.167	5109.9360	10600.69	. . V Q . .
14.250	5185.1377	10919.27	. . V .Q . .
14.333	5262.7275	11266.07	. . V .Q . .
14.417	5342.2754	11550.37	. . V . Q . .
14.500	5423.7329	11827.61	. . V . Q . .
14.583	5507.2661	12129.02	. . V . Q . .
14.667	5593.1748	12473.93	. . V . Q . .
14.750	5681.3789	12807.26	. . V . Q . .
14.833	5771.7417	13120.67	. . V . Q . .
14.917	5864.4668	13463.71	. . V . Q . .
15.000	5959.4951	13798.15	. . V . Q . .
15.083	6056.8887	14141.58	. . V . Q . .
15.167	6156.4600	14457.73	. . V . Q . .
15.250	6258.1743	14768.92	. . V . Q . .
15.333	6362.0562	15083.68	. . V . Q. .
15.417	6467.8062	15354.89	. . V . Q. .
15.500	6575.3618	15617.09	. . V . Q .
15.583	6684.8550	15898.39	. . V . Q .
15.667	6795.9946	16137.48	. . V . .Q .
15.750	6908.6719	16360.77	. . V . .Q .
15.833	7022.8887	16584.26	. . V . . Q .
15.917	7138.7661	16825.44	. . V . . Q .
16.000	7256.1948	17050.65	. . V . . Q .
16.083	7376.1016	17410.49	. . V . . Q .
16.167	7498.4097	17759.11	. . V . . Q .
16.250	7621.7832	17913.80	. . V . . Q .
16.333	7746.2461	18072.01	. . V . . Q .
16.417	7871.3975	18172.01	. . V . . Q .
16.500	7997.9077	18369.28	. . V . . Q .
16.583	8125.2715	18493.22	. . V. . Q .
16.667	8253.5459	18625.51	. . V. . Q .
16.750	8384.2920	18984.27	. . V. . Q .
16.833	8517.0068	19270.12	. . V . Q .
16.917	8651.4580	19522.29	. . V . Q .
17.000	8787.7549	19790.26	. . V . Q .
17.083	8925.0840	19940.23	. . .V . Q .
17.167	9062.1914	19907.98	. . .V . Q .
17.250	9200.6289	20101.05	. . .V . Q.
17.333	9339.6367	20183.92	. . . V . Q.
17.417	9477.1836	19971.80	. . . V . Q .
17.500	9615.8291	20131.30	. . . V . Q.
17.583	9755.8887	20336.62	. . . V . Q.
17.667	9893.0664	19918.17	. . . V . Q .
17.750	10030.8682	20008.75	. . . V . Q .
17.833	10170.6582	20297.57	. . . V . Q.
17.917	10312.0996	20537.27	. . . V . Q.
18.000	10449.9395	20014.38	. . . V . Q .
18.083	10588.5010	20119.16	. . . V . Q.
18.167	10729.8867	20529.23	. . . V . Q.
18.250	10870.5391	20422.67	. . . V . Q.
18.333	11011.9951	20539.42	. . . V . Q.
18.417	11147.6729	19700.41	. . . V . Q .

18.500	11282.1963	19532.82	. . . V . Q .
18.583	11418.2676	19757.59	. . . V . Q .
18.667	11557.7490	20252.66	. . . V . Q.
18.750	11693.8135	19756.60	. . . V . Q .
18.833	11825.9043	19179.61	. . . V . Q .
18.917	11957.6123	19123.94	. . . V . Q .
19.000	12086.3828	18697.50	. . . V . Q .
19.083	12214.1504	18551.87	. . . V. Q .
19.167	12338.4863	18053.62	. . . V. Q .
19.250	12459.2705	17537.91	. . . V. Q .
19.333	12578.0352	17244.66	. . . V. Q .
19.417	12695.6436	17076.79	. . . V Q .
19.500	12810.9268	16739.11	. . . V Q .
19.583	12923.2246	16305.69	. . . VQ .
19.667	13032.3486	15844.87	. . . Q .
19.750	13138.0361	15345.80	. . . Q.V .
19.833	13240.8574	14929.62	. . . Q .V .
19.917	13340.1387	14415.61	. . . Q .V .
20.000	13437.0889	14077.22	. . . Q .V .
20.083	13531.2041	13665.54	. . . Q . V .
20.167	13622.5801	13267.78	. . . Q . V .
20.250	13711.3594	12890.79	. . . Q . V .
20.333	13797.1738	12460.27	. . . Q . V .
20.417	13880.5283	12103.09	. . . Q . V .
20.500	13961.0762	11695.55	. . . Q . V .
20.583	14038.5938	11255.48	. . .Q . V .
20.667	14113.5068	10877.31	. . .Q . V .
20.750	14186.0947	10539.83	. . Q . V .
20.833	14256.5254	10226.52	. . Q. . V .
20.917	14324.2559	9834.41	. . Q. . V .
21.000	14390.0957	9559.93	. . Q . . V .
21.083	14454.1367	9298.74	. . Q . . V .
21.167	14516.5537	9062.94	. . Q . . V .
21.250	14577.4385	8840.54	. . Q . . V .
21.333	14636.7354	8609.93	. . Q . . V .
21.417	14694.1650	8338.76	. . Q . . V .
21.500	14749.2559	7999.22	. . Q . . V .
21.583	14802.9082	7790.36	. . Q . . V .
21.667	14855.2891	7605.70	. . Q . . V .
21.750	14906.4971	7435.44	. . Q . . V .
21.833	14956.5107	7262.03	. . Q . . V .
21.917	15005.4443	7105.12	. . Q . . V .
22.000	15053.3174	6951.22	. . Q . . V .
22.083	15100.1738	6803.55	. . Q . . V .
22.167	15146.0283	6658.06	. . Q . . V .
22.250	15190.9004	6515.39	. . Q . . V .
22.333	15234.8213	6377.27	. . Q . . V .
22.417	15277.8174	6242.97	. . Q . . V .
22.500	15320.0225	6128.13	. .Q . . V .
22.583	15361.5195	6025.31	. .Q . . V .
22.667	15402.3213	5924.41	. .Q . . V .
22.750	15442.4453	5826.05	. .Q . . V .
22.833	15481.9199	5731.67	. .Q . . V .
22.917	15520.8174	5647.85	. Q . . V .
23.000	15559.1572	5566.88	. Q . . V .
23.083	15596.9512	5487.74	. Q . . V .
23.167	15634.2119	5410.31	. Q . . V .
23.250	15670.9834	5339.24	. Q . . V .

23.333	15707.2842	5270.91	.	Q	.	.	V	.
23.417	15743.1367	5205.83	.	Q	.	.	V	.
23.500	15778.6191	5152.01	.	Q	.	.	V	.
23.583	15813.7568	5101.94	.	Q.	.	.	V	.
23.667	15848.5566	5052.90	.	Q.	.	.	V	.
23.750	15883.0078	5002.28	.	Q.	.	.	V	.
23.833	15917.0908	4948.84	.	Q.	.	.	V	.
23.917	15950.5635	4860.24	.	Q.	.	.	V	.
24.000	15983.6309	4801.40	.	Q.	.	.	V	.
24.083	16016.3350	4748.57	.	Q.	.	.	V	.
24.167	16048.6357	4690.05	.	Q.	.	.	V	.
24.250	16080.5127	4628.56	.	Q .	.	.	V	.
24.333	16111.9619	4566.38	.	Q .	.	.	V	.
24.417	16142.9854	4504.67	.	Q .	.	.	V	.
24.500	16173.5518	4438.23	.	Q .	.	.	V	.
24.583	16203.6475	4369.89	.	Q .	.	.	V	.
24.667	16233.2773	4302.20	.	Q .	.	.	V	.
24.750	16262.3711	4224.39	.	Q .	.	.	V	.
24.833	16290.8672	4137.67	.	Q .	.	.	V	.
24.917	16318.7285	4045.44	.	Q .	.	.	V	.
25.000	16345.8936	3944.33	.	Q .	.	.	V	.
25.083	16372.3379	3839.65	.	Q .	.	.	V	.
25.167	16398.0840	3738.27	.	Q .	.	.	V	.
25.250	16423.0488	3624.85	.	Q .	.	.	V	.
25.333	16447.2109	3508.34	.	Q .	.	.	V	.
25.417	16470.6660	3405.69	.	Q .	.	.	V	.
25.500	16493.3477	3293.27	.	Q .	.	.	V	.
25.583	16515.1582	3166.84	.	Q .	.	.	V	.
25.667	16536.2285	3059.36	.	Q .	.	.	V	.
25.750	16556.5391	2949.21	.	Q .	.	.	V	.
25.833	16575.9980	2825.57	.	Q .	.	.	V	.
25.917	16594.5293	2690.86	.	Q .	.	.	V	.
26.000	16612.2734	2576.54	.	Q .	.	.	V	.
26.083	16629.1797	2454.80	.	Q .	.	.	V	.
26.167	16645.1074	2312.71	.	Q .	.	.	V	.
26.250	16660.0762	2173.46	.	Q .	.	.	V	.
26.333	16673.9844	2019.35	.	Q .	.	.	V	.
26.417	16687.0820	1901.92	.	Q .	.	.	V	.
26.500	16699.4453	1795.03	.	Q .	.	.	V	.
26.583	16711.0020	1677.99	.	Q .	.	.	V	.
26.667	16721.5879	1536.98	.	Q .	.	.	V	.
26.750	16731.3301	1414.57	.	Q .	.	.	V	.
26.833	16740.3770	1313.74	.	Q .	.	.	V	.
26.917	16748.6836	1206.22	.	Q .	.	.	V	.
27.000	16756.3594	1114.52	.	Q .	.	.	V	.
27.083	16763.3945	1021.49	.	Q .	.	.	V	.
27.167	16769.8691	940.20	.	Q .	.	.	V	.
27.250	16775.8867	873.82	.	Q .	.	.	V	.
27.333	16781.4512	807.87	.	Q .	.	.	V	.
27.417	16786.5469	739.96	.	Q .	.	.	V	.
27.500	16791.2051	676.39	.	Q .	.	.	V	.
27.583	16795.4590	617.55	.	Q .	.	.	V	.
27.667	16799.3379	563.34	.	Q .	.	.	V	.
27.750	16802.8984	516.89	.	Q .	.	.	V	.
27.833	16806.1660	474.47	Q	.	.	.	V	.
27.917	16809.1914	439.21	Q	.	.	.	V	.
28.000	16811.9805	404.85	Q	.	.	.	V	.
28.083	16814.5508	373.18	Q	.	.	.	V	.

28.167	16816.9082	342.37	Q	.	.	.	V	.
28.250	16819.0605	312.59	Q	.	.	.	V	.
28.333	16821.0215	284.82	Q	.	.	.	V	.
28.417	16822.7930	257.30	Q	.	.	.	V	.
28.500	16824.4004	233.41	Q	.	.	.	V	.
28.583	16825.8789	214.72	Q	.	.	.	V	.
28.667	16827.2305	196.20	Q	.	.	.	V	.
28.750	16828.4551	177.81	Q	.	.	.	V	.
28.833	16829.5605	160.65	Q	.	.	.	V	.
28.917	16830.5820	148.45	Q	.	.	.	V	.
29.000	16831.5254	136.90	Q	.	.	.	V	.
29.083	16832.3887	125.44	Q	.	.	.	V	.
29.167	16833.1738	114.05	Q	.	.	.	V	.
29.250	16833.8809	102.74	Q	.	.	.	V	.
29.333	16834.5117	91.51	Q	.	.	.	V	.
29.417	16835.0742	81.75	Q	.	.	.	V	.
29.500	16835.6113	78.00	Q	.	.	.	V	.
29.583	16836.1270	74.95	Q	.	.	.	V	.
29.667	16836.6230	71.91	Q	.	.	.	V	.
29.750	16837.0977	68.90	Q	.	.	.	V	.
29.833	16837.5508	65.91	Q	.	.	.	V	.
29.917	16837.9844	62.97	Q	.	.	.	V	.
30.000	16838.3984	60.05	Q	.	.	.	V	.
30.083	16838.7910	57.13	Q	.	.	.	V	.
30.167	16839.1641	54.23	Q	.	.	.	V	.
30.250	16839.5176	51.36	Q	.	.	.	V	.
30.333	16839.8516	48.50	Q	.	.	.	V	.
30.417	16840.1660	45.69	Q	.	.	.	V	.
30.500	16840.4609	42.88	Q	.	.	.	V	.
30.583	16840.7363	40.08	Q	.	.	.	V	.
30.667	16840.9941	37.33	Q	.	.	.	V	.
30.750	16841.2324	34.59	Q	.	.	.	V	.
30.833	16841.4512	31.88	Q	.	.	.	V	.
30.917	16841.6523	29.18	Q	.	.	.	V	.
31.000	16841.8340	26.50	Q	.	.	.	V	.
31.083	16841.9980	23.84	Q	.	.	.	V	.
31.167	16842.1445	21.19	Q	.	.	.	V	.
31.250	16842.2715	18.56	Q	.	.	.	V	.
31.333	16842.3809	15.95	Q	.	.	.	V	.
31.417	16842.4727	13.35	Q	.	.	.	V	.
31.500	16842.5469	10.77	Q	.	.	.	V	.
31.583	16842.6035	8.21	Q	.	.	.	V	.
31.667	16842.6426	5.66	Q	.	.	.	V	.
31.750	16842.6641	3.13	Q	.	.	.	V	.
31.833	16842.6680	0.61	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%	1910.0
10%	1430.0
20%	1155.0
30%	630.0
40%	485.0

50%	405.0
60%	345.0
70%	290.0
80%	225.0
90%	155.0

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END OF FLOODSCx ROUTING ANALYSIS

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             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
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             Ver. 17.0  Release Date: 07/01/2010  License ID 1527

                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 100-YR EV AUG 2023 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0034CS.DAT
  TIME/DATE OF STUDY: 13:19 08/10/2023


                        ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   66557.602 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.377 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.286; LOW LOSS FRACTION = 0.394
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.48; 30-MINUTE =  0.93;  1-HOUR =  1.28
    3-HOUR =  2.35;    6-HOUR =  3.46; 24-HOUR =  6.02
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.294; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.741;    6-HOUR = 0.887; 24-HOUR = 0.933
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0034CS.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0     22840.8|
18.000 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

                        Michael Baker International
                      5 Hutton Centre Drive Suite 500
                            Santa Ana, CA92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - SINGLE AREA UH                                 *
* PHASE CONDITION NO PA4&5 - REGIONAL NODE 134T                         *
* 100-YR EV APRIL 2019 CCHIU                                            *
 ************************************************************************

  FILE NAME: EV0034TS.DAT
  TIME/DATE OF STUDY: 07:05 04/10/2019


******************************************************************************
  FLOW PROCESS FROM NODE  13500.00 TO NODE    134.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3859.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.252 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284
         LOW LOSS FRACTION = 0.408
         *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 = 0.828
          30-MINUTE FACTOR = 0.828
           1-HOUR FACTOR = 0.828
           3-HOUR FACTOR = 0.974
           6-HOUR FACTOR = 0.987
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.656
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.380	177.538
2	1.141	355.076
3	1.929	367.811
4	3.008	503.662
5	4.367	634.172
6	6.601	1043.107
7	9.721	1456.072
8	13.136	1594.051
9	17.221	1906.742
10	21.055	1789.901
11	25.499	2074.514
12	29.756	1987.148
13	35.003	2449.106
14	40.040	2351.261
15	46.242	2894.908
16	52.299	2827.075
17	57.131	2255.431
18	63.106	2789.185
19	68.001	2284.925
20	72.435	2069.620
21	76.349	1827.030
22	79.387	1418.168
23	82.406	1408.955
24	85.105	1260.105
25	87.323	1035.196
26	89.054	808.030
27	90.554	700.127
28	91.941	647.638
29	93.228	600.583
30	94.328	513.506
31	95.176	395.781
32	95.976	373.655
33	96.535	260.795
34	97.057	243.673
35	97.579	243.673
36	98.005	199.018
37	98.149	67.048
38	98.274	58.145
39	98.399	58.351
40	98.523	58.074
41	98.648	58.351
42	98.773	58.212
43	98.898	58.212
44	99.023	58.351
45	99.147	58.212
46	99.272	58.212
47	99.397	58.212
48	99.521	58.212

49	99.646	58.212
50	99.771	58.212
51	99.896	58.212
52	100.000	48.775

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 535.3984
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 897.1114

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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.	600.0	1200.0	1800.0	2400.0
0.083	0.0041	0.60	Q	.	.	.	.
0.167	0.0165	1.80	Q	.	.	.	.
0.250	0.0375	3.04	Q	.	.	.	.
0.333	0.0702	4.75	Q	.	.	.	.
0.417	0.1178	6.91	Q	.	.	.	.
0.500	0.1897	10.45	Q	.	.	.	.
0.583	0.2957	15.39	Q	.	.	.	.
0.667	0.4391	20.82	Q	.	.	.	.
0.750	0.6273	27.32	Q	.	.	.	.
0.833	0.8576	33.44	Q	.	.	.	.
0.917	1.1369	40.55	Q	.	.	.	.
1.000	1.4632	47.39	Q	.	.	.	.
1.083	1.8476	55.81	Q	.	.	.	.
1.167	2.2878	63.92	VQ	.	.	.	.
1.250	2.7968	73.90	VQ	.	.	.	.
1.333	3.3731	83.68	VQ	.	.	.	.
1.417	4.0037	91.57	VQ	.	.	.	.
1.500	4.7013	101.29	VQ	.	.	.	.
1.583	5.4543	109.34	VQ	.	.	.	.
1.667	6.2580	116.69	VQ	.	.	.	.
1.750	7.1068	123.25	V Q	.	.	.	.
1.833	7.9915	128.46	V Q	.	.	.	.
1.917	8.9120	133.65	V Q	.	.	.	.
2.000	9.8649	138.37	V Q	.	.	.	.
2.083	10.8452	142.34	V Q	.	.	.	.
2.167	11.8477	145.56	V Q	.	.	.	.
2.250	12.8700	148.43	V Q	.	.	.	.
2.333	13.9109	151.14	V Q	.	.	.	.
2.417	14.9695	153.70	V Q	.	.	.	.
2.500	16.0437	155.98	V Q	.	.	.	.
2.583	17.1311	157.88	V Q	.	.	.	.
2.667	18.2309	159.70	V Q	.	.	.	.
2.750	19.3409	161.16	V Q	.	.	.	.
2.833	20.4605	162.57	V Q	.	.	.	.
2.917	21.5899	163.99	V Q	.	.	.	.
3.000	22.7280	165.26	.VQ	.	.	.	.
3.083	23.8720	166.10	.VQ	.	.	.	.
3.167	25.0215	166.91	.VQ	.	.	.	.
3.250	26.1767	167.73	.VQ	.	.	.	.
3.333	27.3375	168.56	.VQ	.	.	.	.
3.417	28.5042	169.39	.VQ	.	.	.	.
3.500	29.6766	170.23	.VQ	.	.	.	.
3.583	30.8548	171.08	.VQ	.	.	.	.
3.667	32.0390	171.94	.VQ	.	.	.	.
3.750	33.2290	172.80	.VQ	.	.	.	.
3.833	34.4251	173.67	.VQ	.	.	.	.
3.917	35.6272	174.55	.VQ	.	.	.	.

4.000	36.8354	175.43	.VQ	.	.	.	.
4.083	38.0498	176.33	.VQ	.	.	.	.
4.167	39.2704	177.22	.VQ	.	.	.	.
4.250	40.4972	178.13	.VQ	.	.	.	.
4.333	41.7301	179.02	.VQ	.	.	.	.
4.417	42.9680	179.75	.VQ	.	.	.	.
4.500	44.2110	180.48	.V Q	.	.	.	.
4.583	45.4591	181.23	. VQ	.	.	.	.
4.667	46.7124	181.98	. VQ	.	.	.	.
4.750	47.9709	182.74	. VQ	.	.	.	.
4.833	49.2348	183.51	. VQ	.	.	.	.
4.917	50.5039	184.28	. VQ	.	.	.	.
5.000	51.7785	185.07	. VQ	.	.	.	.
5.083	53.0586	185.86	. VQ	.	.	.	.
5.167	54.3441	186.66	. VQ	.	.	.	.
5.250	55.6353	187.48	. VQ	.	.	.	.
5.333	56.9321	188.30	. VQ	.	.	.	.
5.417	58.2347	189.13	. VQ	.	.	.	.
5.500	59.5430	189.97	. VQ	.	.	.	.
5.583	60.8572	190.82	. VQ	.	.	.	.
5.667	62.1773	191.68	. VQ	.	.	.	.
5.750	63.5034	192.55	. VQ	.	.	.	.
5.833	64.8355	193.43	. VQ	.	.	.	.
5.917	66.1738	194.32	. VQ	.	.	.	.
6.000	67.5183	195.22	. Q	.	.	.	.
6.083	68.8691	196.13	. Q	.	.	.	.
6.167	70.2262	197.05	. Q	.	.	.	.
6.250	71.5898	197.99	. Q	.	.	.	.
6.333	72.9598	198.94	. Q	.	.	.	.
6.417	74.3365	199.90	. Q	.	.	.	.
6.500	75.7199	200.86	. Q	.	.	.	.
6.583	77.1100	201.85	. Q	.	.	.	.
6.667	78.5070	202.84	. Q	.	.	.	.
6.750	79.9109	203.85	. Q	.	.	.	.
6.833	81.3219	204.87	. Q	.	.	.	.
6.917	82.7399	205.91	. Q	.	.	.	.
7.000	84.1652	206.95	. Q	.	.	.	.
7.083	85.5978	208.01	. Q	.	.	.	.
7.167	87.0378	209.09	. Q	.	.	.	.
7.250	88.4854	210.18	. Q	.	.	.	.
7.333	89.9405	211.28	. QV	.	.	.	.
7.417	91.4034	212.41	. QV	.	.	.	.
7.500	92.8740	213.54	. QV	.	.	.	.
7.583	94.3526	214.70	. QV	.	.	.	.
7.667	95.8393	215.86	. QV	.	.	.	.
7.750	97.3341	217.05	. QV	.	.	.	.
7.833	98.8372	218.25	. QV	.	.	.	.
7.917	100.3487	219.47	. QV	.	.	.	.
8.000	101.8687	220.70	. QV	.	.	.	.
8.083	103.3974	221.96	. QV	.	.	.	.
8.167	104.9348	223.23	. QV	.	.	.	.
8.250	106.4812	224.53	. QV	.	.	.	.
8.333	108.0365	225.84	. QV	.	.	.	.
8.417	109.6011	227.18	. QV	.	.	.	.
8.500	111.1750	228.53	. QV	.	.	.	.
8.583	112.7584	229.90	. Q V	.	.	.	.
8.667	114.3513	231.30	. Q V	.	.	.	.
8.750	115.9541	232.72	. Q V	.	.	.	.

8.833	117.5667	234.16	. Q V	.	.	.	.
8.917	119.1895	235.63	. Q V	.	.	.	.
9.000	120.8225	237.11	. Q V	.	.	.	.
9.083	122.4659	238.63	. Q V	.	.	.	.
9.167	124.1199	240.16	. QV	.	.	.	.
9.250	125.7848	241.73	. QV	.	.	.	.
9.333	127.4605	243.32	. QV	.	.	.	.
9.417	129.1475	244.94	. QV	.	.	.	.
9.500	130.8457	246.59	. QV	.	.	.	.
9.583	132.5556	248.27	. QV	.	.	.	.
9.667	134.2771	249.97	. QV	.	.	.	.
9.750	136.0107	251.71	. Q V	.	.	.	.
9.833	137.7564	253.48	. Q V	.	.	.	.
9.917	139.5145	255.28	. Q V	.	.	.	.
10.000	141.2853	257.11	. Q V	.	.	.	.
10.083	143.0690	258.99	. Q V	.	.	.	.
10.167	144.8658	260.89	. Q V	.	.	.	.
10.250	146.6759	262.84	. Q V	.	.	.	.
10.333	148.4997	264.82	. Q V	.	.	.	.
10.417	150.3375	266.84	. Q V	.	.	.	.
10.500	152.1894	268.90	. Q V	.	.	.	.
10.583	154.0558	271.01	. Q V	.	.	.	.
10.667	155.9370	273.15	. Q V	.	.	.	.
10.750	157.8333	275.34	. Q V	.	.	.	.
10.833	159.7450	277.58	. Q V	.	.	.	.
10.917	161.6725	279.87	. Q V	.	.	.	.
11.000	163.6160	282.20	. Q V	.	.	.	.
11.083	165.5760	284.59	. Q V	.	.	.	.
11.167	167.5528	287.03	. Q V	.	.	.	.
11.250	169.5468	289.53	. Q V	.	.	.	.
11.333	171.5583	292.08	. Q V	.	.	.	.
11.417	173.5879	294.69	. Q V	.	.	.	.
11.500	175.6358	297.36	. Q V	.	.	.	.
11.583	177.7027	300.11	. Q V	.	.	.	.
11.667	179.7888	302.91	. Q V	.	.	.	.
11.750	181.8948	305.79	. Q V	.	.	.	.
11.833	184.0210	308.73	. Q V	.	.	.	.
11.917	186.1682	311.76	. Q V	.	.	.	.
12.000	188.3366	314.86	. Q V	.	.	.	.
12.083	190.5306	318.57	. Q V	.	.	.	.
12.167	192.7542	322.87	. Q V	.	.	.	.
12.250	195.0085	327.32	. Q V	.	.	.	.
12.333	197.2968	332.25	. Q V	.	.	.	.
12.417	199.6224	337.68	. Q V	.	.	.	.
12.500	201.9943	344.40	. Q V.	.	.	.	.
12.583	204.4218	352.47	. Q V.	.	.	.	.
12.667	206.9083	361.04	. Q V.	.	.	.	.
12.750	209.4613	370.68	. Q V.	.	.	.	.
12.833	212.0790	380.10	. Q V.	.	.	.	.
12.917	214.7686	390.52	. Q V.	.	.	.	.
13.000	217.5290	400.81	. Q V.	.	.	.	.
13.083	220.3709	412.64	. Q V.	.	.	.	.
13.167	223.2933	424.33	. Q V.	.	.	.	.
13.250	226.3086	437.83	. Q V	.	.	.	.
13.333	229.4166	451.28	. Q V	.	.	.	.
13.417	232.6073	463.29	. Q V	.	.	.	.
13.500	235.8927	477.04	. Q V	.	.	.	.
13.583	239.2643	489.56	. Q V	.	.	.	.

13.667	242.7192	501.65	. Q V . . .
13.750	246.2544	513.31	. Q V . . .
13.833	249.8631	523.99	. Q .V . . .
13.917	253.5473	534.94	. Q .V . . .
14.000	257.3056	545.70	. Q.V . . .
14.083	261.1405	556.83	. Q.V . . .
14.167	265.0540	568.24	. Q.V . . .
14.250	269.0469	579.77	. Q.V . . .
14.333	273.1238	591.97	. Q. V . . .
14.417	277.2903	604.97	. Q V . . .
14.500	281.5577	619.63	. Q V . . .
14.583	285.9380	636.02	. Q V . . .
14.667	290.4371	653.27	. Q V . . .
14.750	295.0648	671.95	. .Q V . . .
14.833	299.8211	690.61	. .Q V . . .
14.917	304.7179	711.02	. .Q V . . .
15.000	309.7560	731.53	. . QV . . .
15.083	314.9504	754.22	. . Q V . . .
15.167	320.3032	777.22	. . Q V . . .
15.250	325.8354	803.28	. . QV . . .
15.333	331.5514	829.97	. . QV . . .
15.417	337.4321	853.88	. . QV . . .
15.500	343.4871	879.20	. . QV . . .
15.583	349.7144	904.19	. . Q . . .
15.667	356.1106	928.74	. . Q . . .
15.750	362.6815	954.09	. . QV . . .
15.833	369.4125	977.34	. . Q . . .
15.917	376.3256	1003.78	. . Q . . .
16.000	383.4937	1040.81	. . Q . . .
16.083	391.2191	1121.74	. . VQ . . .
16.167	399.5064	1203.32	. . V Q . . .
16.250	408.1027	1248.17	. . V Q . . .
16.333	417.2780	1332.26	. . V . Q . . .
16.417	427.1247	1429.75	. . V. Q . . .
16.500	438.1202	1596.54	. . V. Q . . .
16.583	450.1648	1748.87	. . V Q. . .
16.667	462.7190	1822.87	. . V Q . . .
16.750	476.0012	1928.58	. . .V . Q . . .
16.833	489.2701	1926.65	. . .V . Q . . .
16.917	503.2140	2024.65	. . . V . Q . . .
17.000	517.2858	2043.22	. . . V . Q . . .
17.083	532.3265	2183.91	. . . V . Q . . .
17.167	547.4509	2196.07	. . . V . Q . . .
17.250	563.4478	2322.74	. . . V . Q .
17.333	579.1493	2279.86	. . . V . Q .
17.417	593.7769	2123.92	. . . V . Q . . .
17.500	608.9361	2201.12	. . . V . Q . . .
17.583	622.9021	2027.87	. . . V . Q . . .
17.667	636.0478	1908.76	. . . V .Q . . .
17.750	648.2881	1777.29	. . . VQ. . .
17.833	659.4803	1625.11	. . . Q V. . .
17.917	670.2600	1565.21	. . . Q V. . .
18.000	680.3819	1469.70	. . . Q V . . .
18.083	689.7010	1353.13	. . . Q V . . .
18.167	698.2460	1240.74	. . Q .V . . .
18.250	706.2614	1163.82	. . Q. .V . . .
18.333	713.8691	1104.64	. . Q . .V . . .
18.417	721.0858	1047.87	. . Q . . V . . .

18.500	727.8182	977.55	. . Q . . V . .
18.583	734.0383	903.16	. . Q . . V . .
18.667	739.9171	853.59	. . Q . . V . .
18.750	745.3404	787.46	. . Q . . V . .
18.833	750.4962	748.62	. . Q . . V . .
18.917	755.3957	711.40	. .Q . . V . .
19.000	759.9630	663.17	. .Q . . V . .
19.083	764.0795	597.73	. Q. . . V . .
19.167	767.9896	567.75	. Q. . . V . .
19.250	771.7277	542.77	. Q. . . V . .
19.333	775.3054	519.49	. Q . . . V . .
19.417	778.7357	498.08	. Q . . . V . .
19.500	782.0157	476.26	. Q . . . V . .
19.583	785.1647	457.22	. Q . . . V . .
19.667	788.1931	439.72	. Q . . . V . .
19.750	791.1157	424.37	. Q . . . V . .
19.833	793.9451	410.82	. Q . . . V . .
19.917	796.6838	397.66	. Q . . . V . .
20.000	799.3381	385.41	. Q . . . V . .
20.083	801.9162	374.33	. Q . . . V . .
20.167	804.4220	363.84	. Q . . . V . .
20.250	806.8499	352.52	. Q . . . V . .
20.333	809.1788	338.16	. Q . . . V .
20.417	811.3564	316.20	. Q . . . V .
20.500	813.4751	307.62	. Q . . . V .
20.583	815.5457	300.66	. Q . . . V .
20.667	817.5717	294.17	. Q . . . V .
20.750	819.5544	287.89	. Q . . . V .
20.833	821.4964	281.97	. Q . . . V .
20.917	823.3995	276.32	. Q . . . V .
21.000	825.2662	271.04	. Q . . . V .
21.083	827.1006	266.36	. Q . . . V .
21.167	828.9042	261.89	. Q . . . V .
21.250	830.6783	257.60	. Q . . . V .
21.333	832.4243	253.51	. Q . . . V .
21.417	834.1443	249.75	. Q . . . V .
21.500	835.8394	246.13	. Q . . . V .
21.583	837.5105	242.64	. Q . . . V .
21.667	839.1584	239.28	. Q . . . V .
21.750	840.7840	236.03	. Q . . . V .
21.833	842.3879	232.89	. Q . . . V .
21.917	843.9708	229.85	. Q . . . V .
22.000	845.5335	226.90	. Q . . . V .
22.083	847.0765	224.04	. Q . . . V .
22.167	848.6005	221.27	. Q . . . V .
22.250	850.1059	218.58	. Q . . . V .
22.333	851.5935	216.00	. Q . . . V .
22.417	853.0648	213.63	. Q . . . V .
22.500	854.5202	211.33	. Q . . . V .
22.583	855.9602	209.09	. Q . . . V .
22.667	857.3853	206.92	. Q . . . V .
22.750	858.7957	204.80	. Q . . . V .
22.833	860.1920	202.74	. Q . . . V .
22.917	861.5745	200.74	. Q . . . V .
23.000	862.9436	198.79	. Q . . . V .
23.083	864.2996	196.88	. Q . . . V .
23.167	865.6427	195.03	. Q . . . V .
23.250	866.9734	193.22	. Q . . . V .

23.333	868.2919	191.45	.	Q	.	.	.	V .
23.417	869.5986	189.73	.	Q	.	.	.	V .
23.500	870.8936	188.04	.	Q	.	.	.	V .
23.583	872.1774	186.40	.	Q	.	.	.	V .
23.667	873.4500	184.79	.	Q	.	.	.	V .
23.750	874.7119	183.22	.	Q	.	.	.	V.
23.833	875.9631	181.68	.	Q	.	.	.	V.
23.917	877.2040	180.18	.	Q	.	.	.	V.
24.000	878.4348	178.70	.	Q	.	.	.	V.
24.083	879.6515	176.67	.	Q	.	.	.	V.
24.167	880.8503	174.07	.	Q	.	.	.	V.
24.250	882.0311	171.46	.	Q	.	.	.	V.
24.333	883.1911	168.43	.	Q	.	.	.	V.
24.417	884.3275	165.00	.	Q	.	.	.	V.
24.500	885.4310	160.23	.	Q	.	.	.	V.
24.583	886.4924	154.12	.	Q	.	.	.	V.
24.667	887.5090	147.60	.	Q	.	.	.	V.
24.750	888.4738	140.09	.	Q	.	.	.	V.
24.833	889.3900	133.03	.	Q	.	.	.	V.
24.917	890.2513	125.07	.	Q	.	.	.	V.
25.000	891.0604	117.47	.	Q	.	.	.	V.
25.083	891.8068	108.38	.	Q	.	.	.	V.
25.167	892.4933	99.69	.	Q	.	.	.	V.
25.250	893.1078	89.23	.	Q	.	.	.	V.
25.333	893.6523	79.07	.	Q	.	.	.	V.
25.417	894.1407	70.92	.	Q	.	.	.	V.
25.500	894.5610	61.02	.	Q	.	.	.	V.
25.583	894.9254	52.90	Q	.	.	.	.	V.
25.667	895.2391	45.56	Q	.	.	.	.	V.
25.750	895.5083	39.08	Q	.	.	.	.	V.
25.833	895.7427	34.03	Q	.	.	.	.	V.
25.917	895.9427	29.05	Q	.	.	.	.	V.
26.000	896.1122	24.60	Q	.	.	.	.	V.
26.083	896.2564	20.94	Q	.	.	.	.	V.
26.167	896.3809	18.08	Q	.	.	.	.	V.
26.250	896.4883	15.59	Q	.	.	.	.	V.
26.333	896.5799	13.30	Q	.	.	.	.	V.
26.417	896.6569	11.18	Q	.	.	.	.	V.
26.500	896.7215	9.38	Q	.	.	.	.	V.
26.583	896.7764	7.98	Q	.	.	.	.	V.
26.667	896.8223	6.66	Q	.	.	.	.	V.
26.750	896.8619	5.74	Q	.	.	.	.	V.
26.833	896.8954	4.88	Q	.	.	.	.	V.
26.917	896.9232	4.02	Q	.	.	.	.	V.
27.000	896.9460	3.32	Q	.	.	.	.	V.
27.083	896.9672	3.07	Q	.	.	.	.	V.
27.167	896.9869	2.86	Q	.	.	.	.	V.
27.250	897.0051	2.64	Q	.	.	.	.	V.
27.333	897.0218	2.43	Q	.	.	.	.	V.
27.417	897.0370	2.21	Q	.	.	.	.	V.
27.500	897.0508	2.00	Q	.	.	.	.	V.
27.583	897.0632	1.79	Q	.	.	.	.	V.
27.667	897.0741	1.58	Q	.	.	.	.	V.
27.750	897.0836	1.38	Q	.	.	.	.	V.
27.833	897.0916	1.17	Q	.	.	.	.	V.
27.917	897.0983	0.97	Q	.	.	.	.	V.
28.000	897.1035	0.76	Q	.	.	.	.	V.
28.083	897.1074	0.56	Q	.	.	.	.	V.

28.167	897.1099	0.36	Q	.	.	.	V.
28.250	897.1111	0.17	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%	1695.0
10%	790.0
20%	365.0
30%	245.0
40%	170.0
50%	130.0
60%	100.0
70%	75.0
80%	60.0
90%	30.0

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2010 Advanced Engineering Software (aes)
             Ver. 17.0  Release Date: 07/01/2010  License ID 1527

                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 100-YR EV AUG 2023 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV0034US.DAT
  TIME/DATE OF STUDY: 13:19 08/10/2023


                        ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   62698.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.377 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.286; LOW LOSS FRACTION = 0.393
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.49; 30-MINUTE =  0.93;  1-HOUR =  1.29
    3-HOUR =  2.37;    6-HOUR =  3.51; 24-HOUR =  6.11
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0034US.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0     22058.0|
18.000 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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

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


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJJO - SINGLE AREA UH                                 *
* PHASE CONDITION NO PA4&5 - REGIONAL NODE 119                           *
* 100-YR EV DECEMBER 2018 FKAZI                                          *
 ************************************************************************

  FILE NAME: EV00119S.DAT
  TIME/DATE OF STUDY: 10:18 12/28/2018


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    119.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   49511.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.964 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.298
         LOW LOSS FRACTION = 0.376
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.51
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.95
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.32
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.49
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.72
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.54

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.345
          30-MINUTE FACTOR = 0.395
           1-HOUR FACTOR = 0.435
           3-HOUR FACTOR = 0.785
           6-HOUR FACTOR = 0.904
          24-HOUR FACTOR = 0.944

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.243
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.242	1451.808
2	0.727	2903.613
3	1.212	2903.614
4	1.697	2903.616
5	2.279	3484.346
6	3.015	4406.822
7	3.761	4469.242
8	4.903	6837.067
9	6.364	8745.370
10	8.208	11043.940
11	10.394	13088.885
12	12.522	12744.282
13	15.029	15008.450
14	17.617	15494.038
15	19.936	13888.267
16	22.822	17280.201
17	25.577	16498.842
18	28.123	15246.073
19	31.192	18371.354
20	34.750	21304.545
21	37.558	16816.273
22	41.359	22758.402
23	45.188	22930.492
24	49.462	25591.992
25	52.874	20427.102
26	55.850	17824.145
27	59.337	20876.879
28	63.378	24195.629
29	66.432	18289.957
30	69.459	18126.639
31	72.180	16291.621
32	74.861	16053.930
33	77.066	13201.860
34	78.952	11292.150
35	80.887	11588.043
36	82.790	11395.121
37	84.520	10355.318
38	86.085	9374.812
39	87.417	7974.566
40	88.553	6801.138
41	89.551	5977.646
42	90.492	5631.776
43	91.385	5349.224
44	92.250	5179.738
45	93.060	4850.359
46	93.853	4746.292
47	94.451	3581.773
48	94.990	3224.847

49	95.529	3227.588
50	96.027	2985.054
51	96.374	2079.606
52	96.707	1991.437
53	97.040	1994.133
54	97.373	1991.437
55	97.706	1994.133
56	97.990	1704.773
57	98.089	588.450
58	98.168	476.845
59	98.248	476.845
60	98.327	475.474
61	98.407	474.058
62	98.487	479.586
63	98.566	475.474
64	98.645	475.429
65	98.726	479.586
66	98.805	474.104
67	98.884	476.845
68	98.964	476.845
69	99.043	474.058
70	99.122	474.058
71	99.201	474.058
72	99.281	474.058
73	99.360	474.058
74	99.439	474.058
75	99.518	474.058
76	99.597	474.058
77	99.676	474.058
78	99.756	474.058
79	99.835	474.058
80	99.914	474.058
81	99.993	474.058
82	100.000	40.841

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 9406.3926

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 16055.0361

==========

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. 5100.0 10200.0 15300.0 20400.0
0.083	0.0587	8.52	Q . . . .
0.167	0.2349	25.59	Q . . . .
0.250	0.5290	42.70	Q . . . .
0.333	0.9412	59.86	Q . . . .
0.417	1.4955	80.49	Q . . . .
0.500	2.2296	106.58	Q . . . .
0.583	3.1464	133.12	Q . . . .
0.667	4.3423	173.64	Q . . . .
0.750	5.8951	225.47	Q . . . .
0.833	7.8990	290.96	Q . . . .
0.917	10.4377	368.62	Q . . . .
1.000	13.4990	444.51	Q . . . .
1.083	17.1761	533.91	VQ . . . .
1.167	21.4902	626.42	VQ . . . .
1.250	26.3786	709.79	VQ . . . .
1.333	31.9800	813.33	VQ . . . .
1.417	38.2650	912.58	VQ . . . .
1.500	45.1852	1004.80	VQ . . . .
1.583	52.8687	1115.65	V Q . . . .
1.667	61.4365	1244.05	V Q . . . .
1.750	70.7098	1346.48	V Q . . . .
1.833	80.9313	1484.17	V Q . . . .
1.917	92.1104	1623.21	V Q . . . .
2.000	104.3582	1778.38	V Q . . . .
2.083	117.4687	1903.63	V Q . . . .
2.167	131.3400	2014.13	V Q . . . .
2.250	146.0975	2142.78	V Q . . . .
2.333	161.8787	2291.44	V Q . . . .
2.417	178.4474	2405.77	V Q . . . .
2.500	195.8006	2519.68	V Q . . . .
2.583	213.8657	2623.05	V Q . . . .
2.667	232.6365	2725.53	V Q . . . .
2.750	251.9991	2811.45	V Q . . . .
2.833	271.8796	2886.64	V Q . . . .
2.917	292.2906	2963.68	V Q . . . .
3.000	313.2274	3040.03	V Q . . . .
3.083	334.6488	3110.39	V Q . . . .
3.167	356.5182	3175.43	V Q . . . .
3.250	378.7795	3232.34	V Q . . . .
3.333	401.3880	3282.76	.V Q . . . .
3.417	424.3109	3328.39	.V Q . . . .
3.500	447.5365	3372.37	.V Q . . . .
3.583	471.0537	3414.70	.V Q . . . .
3.667	494.8583	3456.42	.V Q . . . .
3.750	518.9369	3496.21	.V Q . . . .
3.833	543.2879	3535.77	.V Q . . . .
3.917	567.8643	3568.49	.V Q . . . .

4.000	592.6541	3599.49	.V	Q	.	.	.	.
4.083	617.6573	3630.47	.V	Q	.	.	.	.
4.167	642.8667	3660.40	.V	Q	.	.	.	.
4.250	668.2454	3684.98	.V	Q	.	.	.	.
4.333	693.7923	3709.41	.V	Q	.	.	.	.
4.417	719.5072	3733.81	.V	Q	.	.	.	.
4.500	745.3925	3758.55	.V	Q	.	.	.	.
4.583	771.4481	3783.26	.V	Q	.	.	.	.
4.667	797.6647	3806.65	.V	Q	.	.	.	.
4.750	823.9968	3823.43	. V	Q	.	.	.	.
4.833	850.4426	3839.92	. V	Q	.	.	.	.
4.917	877.0013	3856.33	. V	Q	.	.	.	.
5.000	903.6757	3873.11	. V	Q	.	.	.	.
5.083	930.4649	3889.80	. V	Q	.	.	.	.
5.167	957.3719	3906.90	. V	Q	.	.	.	.
5.250	984.3961	3923.90	. V	Q	.	.	.	.
5.333	1011.5399	3941.29	. V	Q	.	.	.	.
5.417	1038.8031	3958.62	. V	Q	.	.	.	.
5.500	1066.1882	3976.32	. V	Q	.	.	.	.
5.583	1093.6949	3993.97	. V	Q	.	.	.	.
5.667	1121.3259	4012.02	. V	Q	.	.	.	.
5.750	1149.0806	4029.98	. V	Q	.	.	.	.
5.833	1176.9618	4048.36	. V	Q	.	.	.	.
5.917	1204.9691	4066.66	. V	Q	.	.	.	.
6.000	1233.1055	4085.40	. V	Q	.	.	.	.
6.083	1261.3704	4104.06	. V	Q	.	.	.	.
6.167	1289.7668	4123.17	. V	Q	.	.	.	.
6.250	1318.2944	4142.21	. V	Q	.	.	.	.
6.333	1346.9563	4161.70	. V	Q	.	.	.	.
6.417	1375.7518	4181.11	. V	Q	.	.	.	.
6.500	1404.6843	4201.00	. V	Q	.	.	.	.
6.583	1433.7533	4220.82	. V	Q	.	.	.	.
6.667	1462.9620	4241.11	. V	Q	.	.	.	.
6.750	1492.3102	4261.34	. V	Q	.	.	.	.
6.833	1521.7834	4279.53	. V	Q	.	.	.	.
6.917	1551.3798	4297.39	. V	Q	.	.	.	.
7.000	1581.1027	4315.77	. V	Q	.	.	.	.
7.083	1610.9515	4334.06	. V	Q	.	.	.	.
7.167	1640.9301	4352.88	. V	Q	.	.	.	.
7.250	1671.0376	4371.62	. V	Q	.	.	.	.
7.333	1701.2780	4390.90	. V	Q	.	.	.	.
7.417	1731.6505	4410.10	. V	Q	.	.	.	.
7.500	1762.1592	4429.86	. V	Q	.	.	.	.
7.583	1792.8035	4449.55	. V	Q	.	.	.	.
7.667	1823.5873	4469.81	. V	Q	.	.	.	.
7.750	1854.5101	4490.00	. V	Q	.	.	.	.
7.833	1885.5762	4510.79	. V	Q	.	.	.	.
7.917	1916.7849	4531.50	. V	Q	.	.	.	.
8.000	1948.1405	4552.84	. V	Q	.	.	.	.
8.083	1979.6426	4574.10	. V	Q	.	.	.	.
8.167	2011.2955	4596.01	. V	Q.	.	.	.	.
8.250	2043.0989	4617.84	. V	Q.	.	.	.	.
8.333	2075.0571	4640.34	. V	Q.	.	.	.	.
8.417	2107.1699	4662.78	. V	Q.	.	.	.	.
8.500	2139.4419	4685.90	. V	Q.	.	.	.	.
8.583	2171.8728	4708.96	. V	Q.	.	.	.	.
8.667	2204.4675	4732.74	. V	Q.	.	.	.	.
8.750	2237.2256	4756.46	. V	Q.	.	.	.	.

8.833	2270.1521	4780.92	.	V	Q.	.	.	.
8.917	2303.2466	4805.33	.	V	Q.	.	.	.
9.000	2336.5144	4830.50	.	V	Q.	.	.	.
9.083	2369.9553	4855.63	.	V	Q.	.	.	.
9.167	2403.5750	4881.56	.	V	Q.	.	.	.
9.250	2437.3728	4907.45	.	V	Q.	.	.	.
9.333	2471.3547	4934.17	.	V	Q.	.	.	.
9.417	2505.5205	4960.86	.	V	Q.	.	.	.
9.500	2539.8760	4988.41	.	V	Q.	.	.	.
9.583	2574.4209	5015.94	.	V	Q.	.	.	.
9.667	2609.1616	5044.36	.	V	Q.	.	.	.
9.750	2644.0981	5072.77	.	V	Q.	.	.	.
9.833	2679.2368	5102.12	.	V	Q	.	.	.
9.917	2714.5774	5131.46	.	V	Q	.	.	.
10.000	2750.1270	5161.78	.	V	Q	.	.	.
10.083	2785.8853	5192.11	.	V	Q	.	.	.
10.167	2821.8594	5223.45	.	V	Q	.	.	.
10.250	2858.0496	5254.82	.	V	Q	.	.	.
10.333	2894.4631	5287.26	.	V	Q	.	.	.
10.417	2931.1003	5319.72	.	V	Q	.	.	.
10.500	2967.9690	5353.31	.	V	Q	.	.	.
10.583	3005.0691	5386.94	.	V	Q	.	.	.
10.667	3042.4089	5421.75	.	V	Q	.	.	.
10.750	3079.9890	5456.62	.	V	Q	.	.	.
10.833	3117.8176	5492.72	.	V	Q	.	.	.
10.917	3155.8955	5528.91	.	V	Q	.	.	.
11.000	3194.2314	5566.39	.	V	Q	.	.	.
11.083	3232.8264	5603.97	.	V	Q	.	.	.
11.167	3271.6895	5642.92	.	V	.Q	.	.	.
11.250	3310.8218	5682.00	.	V	.Q	.	.	.
11.333	3350.2332	5722.52	.	V	.Q	.	.	.
11.417	3389.9246	5763.20	.	V	.Q	.	.	.
11.500	3429.9065	5805.39	.	V	.Q	.	.	.
11.583	3470.1804	5847.77	.	V	.Q	.	.	.
11.667	3510.7573	5891.76	.	V	.Q	.	.	.
11.750	3551.6387	5935.97	.	V	.Q	.	.	.
11.833	3592.8362	5981.88	.	V	.Q	.	.	.
11.917	3634.3518	6028.06	.	V	.Q	.	.	.
12.000	3676.1980	6076.05	.	V	.Q	.	.	.
12.083	3718.4768	6138.88	.	V	. Q	.	.	.
12.167	3761.3015	6218.13	.	V	. Q	.	.	.
12.250	3804.6733	6297.59	.	V	. Q	.	.	.
12.333	3848.6057	6378.97	.	V	. Q	.	.	.
12.417	3893.1401	6466.41	.	V	. Q	.	.	.
12.500	3938.3545	6565.11	.	V	. Q	.	.	.
12.583	3984.2544	6664.68	.	V	. Q	.	.	.
12.667	4031.0178	6790.05	.	V	Q	.	.	.
12.750	4078.7778	6934.74	.	V	Q	.	.	.
12.833	4127.7065	7104.46	.	V	Q	.	.	.
12.917	4177.9458	7294.73	.	V	Q	.	.	.
13.000	4229.4849	7483.49	.	V	Q	.	.	.
13.083	4282.4800	7694.90	.	V	Q	.	.	.
13.167	4336.9785	7913.21	.	V	Q	.	.	.
13.250	4392.8691	8115.28	.	V	Q	.	.	.
13.333	4450.4004	8353.52	.	.V	Q	.	.	.
13.417	4509.5176	8583.81	.	.V	Q	.	.	.
13.500	4570.1494	8803.72	.	.V	Q	.	.	.
13.583	4632.5112	9054.92	.	.V	Q	.	.	.

13.667	4696.8213	9337.81	. .V Q . . .
13.750	4762.7681	9575.51	. .V Q . . .
13.833	4830.7788	9875.16	. . V Q. . .
13.917	4900.8643	10176.42	. . V Q. . .
14.000	4973.2236	10506.61	. . V Q . .
14.083	5047.6104	10800.92	. . V .Q . .
14.167	5123.9688	11087.21	. . V .Q . .
14.250	5202.5024	11403.13	. . V . Q . .
14.333	5283.4512	11753.74	. . V . Q . .
14.417	5366.4424	12050.36	. . V . Q . .
14.500	5451.5454	12356.93	. . V . Q . .
14.583	5538.6274	12644.33	. . V . Q . .
14.667	5627.8594	12956.50	. . V . Q . .
14.750	5719.1748	13259.03	. . V . Q . .
14.833	5812.6123	13567.11	. . V . Q . .
14.917	5908.3213	13896.93	. . V . Q . .
15.000	6006.2451	14218.53	. . V . Q . .
15.083	6106.4482	14549.49	. . V . Q . .
15.167	6208.8784	14872.85	. . V . Q. .
15.250	6313.2690	15157.53	. . V . Q. .
15.333	6419.7749	15464.63	. . V . Q . .
15.417	6528.0830	15726.32	. . V . Q . .
15.500	6637.9038	15945.95	. . V . .Q . .
15.583	6749.4365	16194.53	. . V . .Q . .
15.667	6862.8877	16473.13	. . V . . Q . .
15.750	6977.7378	16676.25	. . V . . Q . .
15.833	7094.2808	16922.01	. . V . . Q . .
15.917	7212.4956	17164.82	. . V . . Q . .
16.000	7332.4565	17418.35	. . V . . Q . .
16.083	7454.7490	17756.86	. . V . . Q . .
16.167	7578.7422	18003.82	. . V . . Q . .
16.250	7703.1851	18069.12	. . V. . Q . .
16.333	7828.3574	18175.03	. . V. . Q . .
16.417	7954.1733	18268.46	. . V. . Q . .
16.500	8080.9897	18413.71	. . V . Q . .
16.583	8208.3242	18489.02	. . V . Q . .
16.667	8337.8652	18809.39	. . V . Q . .
16.750	8469.0264	19044.60	. . .V . Q .
16.833	8602.1250	19325.99	. . .V . Q .
16.917	8736.5859	19523.72	. . .V . Q .
17.000	8870.2451	19407.35	. . . V . Q .
17.083	9005.6680	19663.45	. . . V . Q .
17.167	9140.7617	19615.58	. . . V . Q .
17.250	9274.0430	19352.42	. . . V . Q .
17.333	9409.0518	19603.23	. . . V . Q .
17.417	9543.1777	19475.03	. . . V . Q .
17.500	9676.5635	19367.67	. . . V . Q .
17.583	9812.2324	19699.15	. . . V . Q .
17.667	9949.4268	19920.58	. . . V . Q.
17.750	10083.1484	19416.36	. . . V . Q .
17.833	10221.8740	20142.96	. . . V . Q.
17.917	10360.3594	20108.11	. . . V . Q.
18.000	10500.3477	20326.27	. . . V . Q.
18.083	10635.1592	19574.65	. . . V . Q .
18.167	10768.1738	19313.69	. . . V . Q .
18.250	10903.9629	19716.62	. . . V . Q .
18.333	11042.0684	20052.94	. . . V . Q.
18.417	11174.6523	19251.15	. . . V . Q .

18.500	11306.5029	19144.71	. . . V . Q .
18.583	11436.1641	18826.83	. . . V . Q .
18.667	11564.8760	18688.90	. . . V . Q .
18.750	11690.1611	18191.40	. . . V. Q .
18.833	11812.4180	17751.66	. . . V. Q .
18.917	11933.1445	17529.49	. . . V. Q .
19.000	12051.6113	17201.36	. . . V Q .
19.083	12167.0225	16757.76	. . . V Q .
19.167	12279.3047	16303.35	. . . VQ .
19.250	12388.0752	15793.48	. . . Q .
19.333	12493.0576	15243.40	. . . Q.V .
19.417	12594.9580	14795.96	. . . Q.V .
19.500	12694.2080	14411.12	. . . Q .V .
19.583	12790.7646	14020.00	. . . Q .V .
19.667	12884.3955	13595.17	. . . Q . V .
19.750	12975.3232	13202.65	. . . Q . V .
19.833	13063.3418	12780.31	. . . Q . V .
19.917	13147.5576	12228.14	. . . Q . V .
20.000	13228.5264	11756.67	. . . Q . V .
20.083	13306.9932	11393.44	. . . Q . V .
20.167	13382.9580	11030.15	. . .Q . V .
20.250	13455.6973	10561.77	. . Q . V .
20.333	13525.7598	10173.11	. . Q. . V .
20.417	13593.7246	9868.48	. . Q. . V .
20.500	13659.5947	9564.38	. . Q . . V .
20.583	13723.3633	9259.20	. . Q . . V .
20.667	13784.7402	8911.97	. . Q . . V .
20.750	13843.3262	8506.68	. . Q . . V .
20.833	13900.1299	8247.85	. . Q . . V .
20.917	13955.3252	8014.29	. . Q . . V .
21.000	14008.9619	7788.03	. . Q . . V .
21.083	14061.0244	7559.41	. . Q . . V .
21.167	14111.5996	7343.52	. . Q . . V .
21.250	14160.8535	7151.73	. . Q . . V .
21.333	14208.8916	6975.09	. . Q . . V .
21.417	14255.7852	6809.00	. . Q . . V .
21.500	14301.5654	6647.26	. . Q . . V .
21.583	14346.2695	6491.04	. . Q . . V .
21.667	14389.9414	6341.15	. . Q . . V .
21.750	14432.7012	6208.76	. . Q . . V .
21.833	14474.5859	6081.65	. .Q . . V .
21.917	14515.6934	5968.83	. .Q . . V .
22.000	14556.0664	5862.20	. .Q . . V .
22.083	14595.7217	5757.92	. .Q . . V .
22.167	14634.7344	5664.65	. .Q . . V .
22.250	14673.1836	5582.82	. Q . . V .
22.333	14711.0840	5503.09	. Q . . V .
22.417	14748.4434	5424.61	. Q . . V .
22.500	14785.2881	5349.88	. Q . . V .
22.583	14821.6240	5275.98	. Q . . V .
22.667	14857.4570	5202.98	. Q . . . V .
22.750	14892.8438	5138.09	. Q . . . V .
22.833	14927.4600	5026.32	. Q. . . . V .
22.917	14961.6670	4966.90	. Q. . . . V .
23.000	14995.5088	4913.85	. Q. . . . V .
23.083	15029.0039	4863.46	. Q. . . . V .
23.167	15062.1211	4808.59	. Q. . . . V .
23.250	15094.8623	4754.04	. Q. . . . V .

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 23.333  15127.2334   4700.27  .       Q.        .        .      V  .
 23.417  15159.2393   4647.23  .       Q.        .        .      V  .
 23.500  15190.8857   4595.01  .       Q.        .        .      V  .
 23.583  15222.1768   4543.51  .      Q .        .        .      V  .
 23.667  15253.1182   4492.73  .      Q .        .        .       V .
 23.750  15283.7148   4442.67  .      Q .        .        .       V .
 23.833  15314.0049   4398.17  .      Q .        .        .       V .
 23.917  15343.9990   4355.13  .      Q .        .        .       V .
 24.000  15373.7031   4313.06  .      Q .        .        .       V .
 24.083  15403.0654   4263.41  .      Q .        .        .       V .
 24.167  15432.0332   4206.19  .      Q .        .        .       V .
 24.250  15460.6143   4149.91  .      Q .        .        .       V .
 24.333  15488.8135   4094.54  .      Q .        .        .       V .
 24.417  15516.6143   4036.62  .     Q  .        .        .       V .
 24.500  15543.9844   3974.16  .     Q  .        .        .       V .
 24.583  15570.9277   3912.18  .     Q  .        .        .       V .
 24.667  15597.3545   3837.15  .     Q  .        .        .       V .
 24.750  15623.1934   3751.82  .     Q  .        .        .       V .
 24.833  15648.3887   3658.29  .     Q  .        .        .       V .
 24.917  15672.8662   3554.19  .    Q   .        .        .        V.
 25.000  15696.6484   3453.15  .    Q   .        .        .        V.
 25.083  15719.6504   3339.84  .    Q   .        .        .        V.
 25.167  15741.8594   3224.75  .    Q   .        .        .        V.
 25.250  15763.3477   3120.10  .    Q   .        .        .        V.
 25.333  15783.9854   2996.53  .   Q    .        .        .        V.
 25.417  15803.8105   2878.58  .   Q    .        .        .        V.
 25.500  15822.8809   2768.97  .   Q    .        .        .        V.
 25.583  15841.0762   2641.98  .   Q    .        .        .        V.
 25.667  15858.2852   2498.80  .  Q     .        .        .        V.
 25.750  15874.6973   2383.02  .  Q     .        .        .        V.
 25.833  15890.0781   2233.33  .  Q     .        .        .        V.
 25.917  15904.4287   2083.72  .  Q     .        .        .        V.
 26.000  15917.6494   1919.59  . Q      .        .        .        V.
 26.083  15929.9561   1786.87  . Q      .        .        .        V.
 26.167  15941.4600   1670.34  . Q      .        .        .        V.
 26.250  15952.0439   1536.77  . Q      .        .        .        V.
 26.333  15961.5801   1384.67  .Q       .        .        .        V.
 26.417  15970.3145   1268.19  .Q       .        .        .        V.
 26.500  15978.2588   1153.46  .Q       .        .        .        V.
 26.583  15985.4922   1050.27  .Q       .        .        .        V.
 26.667  15992.0293    949.16 .Q       .        .        .        V.
 26.750  15997.9893    865.45 .Q       .        .        .        V.
 26.833  16003.4541    793.49 .Q       .        .        .        V.
 26.917  16008.4150    720.29 .Q       .        .        .        V.
 27.000  16012.8828    648.72 .Q       .        .        .        V.
 27.083  16016.9033    583.71 .Q       .        .        .        V.
 27.167  16020.5186    524.89 .Q       .        .        .        V.
 27.250  16023.7871    474.65 Q        .        .        .        V.
 27.333  16026.7598    431.63 Q        .        .        .        V.
 27.417  16029.4717    393.73 Q        .        .        .        V.
 27.500  16031.9385    358.11 Q        .        .        .        V.
 27.583  16034.1729    324.38 Q        .        .        .        V.
 27.667  16036.1826    291.88 Q        .        .        .        V.
 27.750  16037.9834    261.52 Q        .        .        .        V.
 27.833  16039.5811    231.96 Q        .        .        .        V.
 27.917  16041.0234    209.43 Q        .        .        .        V.
 28.000  16042.3262    189.14 Q        .        .        .        V.
 28.083  16043.4902    168.97 Q        .        .        .        V.
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 28.167  16044.5254    150.35  Q        .        .        .        V.
 28.250  16045.4697    137.16  Q        .        .        .        V.
 28.333  16046.3281    124.57  Q        .        .        .        V.
 28.417  16047.0996    112.06  Q        .        .        .        V.
 28.500  16047.7861     99.64  Q        .        .        .        V.
 28.583  16048.3877     87.29  Q        .        .        .        V.
 28.667  16048.9160     76.71  Q        .        .        .        V.
 28.750  16049.4170     72.74  Q        .        .        .        V.
 28.833  16049.8955     69.46  Q        .        .        .        V.
 28.917  16050.3516     66.20  Q        .        .        .        V.
 29.000  16050.7852     62.98  Q        .        .        .        V.
 29.083  16051.1973     59.79  Q        .        .        .        V.
 29.167  16051.5869     56.59  Q        .        .        .        V.
 29.250  16051.9551     53.43  Q        .        .        .        V.
 29.333  16052.3018     50.30  Q        .        .        .        V.
 29.417  16052.6270     47.17  Q        .        .        .        V.
 29.500  16052.9307     44.09  Q        .        .        .        V.
 29.583  16053.2129     41.02  Q        .        .        .        V.
 29.667  16053.4746     37.96  Q        .        .        .        V.
 29.750  16053.7148     34.95  Q        .        .        .        V.
 29.833  16053.9346     31.95  Q        .        .        .        V.
 29.917  16054.1338     28.98  Q        .        .        .        V.
 30.000  16054.3135     26.02  Q        .        .        .        V.
 30.083  16054.4727     23.09  Q        .        .        .        V.
 30.167  16054.6113     20.17  Q        .        .        .        V.
 30.250  16054.7305     17.27  Q        .        .        .        V.
 30.333  16054.8291     14.39  Q        .        .        .        V.
 30.417  16054.9082     11.52  Q        .        .        .        V.
 30.500  16054.9678      8.68  Q        .        .        .        V.
 30.583  16055.0078      5.85  Q        .        .        .        V.
 30.667  16055.0283      3.04  Q        .        .        .        V.
 30.750  16055.0303      0.24  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          Duration
      Peak Flow Rate               (minutes)
  ======================           =========
             0%                     1845.0
            10%                     1425.0
            20%                     1110.0
            30%                      585.0
            40%                      455.0
            50%                      390.0
            60%                      330.0
            70%                      270.0
            80%                      215.0
            90%                      135.0
===============================================================================

  END OF FLOODSCx ROUTING ANALYSIS
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**************************************************************************

            F L O O D    R O U T I N G    A N A L Y S I S
            USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
        (c) Copyright 1989-2013 Advanced Engineering Software (aes)
            Ver. 20.0  Release Date: 06/01/2013  License ID 1237

                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 BODR 2022 - NODE 126                                         *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 100-YR EV DEC 2022 ROKAMOTO                                          *
 ************************************************************************

  FILE NAME: EV00126S.DAT
  TIME/DATE OF STUDY: 13:17 12/12/2022


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   50438.699 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.046 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.298
         LOW LOSS FRACTION = 0.379
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.51
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.95
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.32
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.48
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.70
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.50

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.341
          30-MINUTE FACTOR = 0.392
           1-HOUR FACTOR = 0.432
           3-HOUR FACTOR = 0.782
           6-HOUR FACTOR = 0.902
          24-HOUR FACTOR = 0.943

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.073
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.233	1419.711
2	0.698	2839.422
3	1.164	2839.422
4	1.629	2839.422
5	2.155	3205.912
6	2.852	4255.699
7	3.561	4320.852
8	4.499	5725.954
9	5.823	8073.983
10	7.457	9967.943
11	9.471	12283.259
12	11.545	12650.124
13	13.634	12745.359
14	16.337	16485.943
15	18.564	13588.729
16	20.931	14434.490
17	23.852	17820.850
18	26.301	14939.122
19	28.898	15840.822
20	31.902	18321.863
21	35.341	20979.320
22	37.992	16171.830
23	41.735	22830.645
24	45.415	22446.002
25	49.545	25195.232
26	52.807	19897.119
27	55.658	17392.332
28	58.927	19936.422
29	62.868	24040.723
30	65.914	18582.096
31	68.769	17414.996
32	71.498	16645.338
33	74.059	15622.975
34	76.395	14250.406
35	78.230	11194.019
36	80.055	11131.518
37	81.936	11475.904
38	83.671	10579.381
39	85.261	9699.658
40	86.656	8512.082
41	87.882	7480.224
42	88.889	6139.814
43	89.841	5809.994
44	90.721	5364.618
45	91.578	5230.121
46	92.394	4977.788
47	93.170	4731.365
48	93.922	4585.093

49	94.481	3413.619
50	94.998	3153.235
51	95.515	3154.724
52	96.001	2964.613
53	96.340	2063.669
54	96.659	1946.671
55	96.978	1949.556
56	97.298	1948.113
57	97.617	1949.602
58	97.926	1880.865
59	98.061	826.343
60	98.138	465.062
61	98.214	466.551
62	98.290	465.109
63	98.367	466.551
64	98.443	468.040
65	98.520	465.062
66	98.596	466.551
67	98.672	465.109
68	98.749	466.551
69	98.825	465.109
70	98.902	467.994
71	98.978	465.109
72	99.054	462.177
73	99.130	462.177
74	99.205	462.177
75	99.281	462.177
76	99.357	462.177
77	99.433	462.177
78	99.508	462.177
79	99.584	462.177
80	99.660	462.177
81	99.736	462.177
82	99.812	462.177
83	99.887	462.177
84	99.963	462.177
85	100.000	225.062

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 9596.7305
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 16169.5801

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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. 5100.0 10200.0 15300.0 20400.0
0.083	0.0567	8.24	Q . . . .
0.167	0.2271	24.73	Q . . . .
0.250	0.5113	41.28	Q . . . .
0.333	0.9099	57.87	Q . . . .
0.417	1.4377	76.64	Q . . . .
0.500	2.1371	101.55	Q . . . .
0.583	3.0111	126.91	Q . . . .
0.667	4.1166	160.51	Q . . . .
0.750	5.5478	207.82	Q . . . .
0.833	7.3816	266.27	Q . . . .
0.917	9.7116	338.31	Q . . . .
1.000	12.5539	412.70	Q . . . .
1.083	15.9138	487.87	Q . . . .
1.167	19.9425	584.96	VQ . . . .
1.250	24.5260	665.52	VQ . . . .
1.333	29.7001	751.27	VQ . . . .
1.417	35.6016	856.90	VQ . . . .
1.500	42.1177	946.15	VQ . . . .
1.583	49.2864	1040.89	V Q . . . .
1.667	57.2089	1150.34	V Q . . . .
1.750	65.9935	1275.53	V Q . . . .
1.833	75.4508	1373.20	V Q . . . .
1.917	85.8493	1509.86	V Q . . . .
2.000	97.1761	1644.65	V Q . . . .
2.083	109.5443	1795.87	V Q . . . .
2.167	122.7451	1916.75	V Q . . . .
2.250	136.6816	2023.59	V Q . . . .
2.333	151.4573	2145.43	V Q . . . .
2.417	167.2395	2291.58	V Q . . . .
2.500	183.8125	2406.40	V Q . . . .
2.583	201.1334	2514.98	V Q . . . .
2.667	219.1727	2619.31	V Q . . . .
2.750	237.8932	2718.21	V Q . . . .
2.833	257.2412	2809.34	V Q . . . .
2.917	277.0979	2883.20	V Q . . . .
3.000	297.4618	2956.83	V Q . . . .
3.083	318.3493	3032.87	V Q . . . .
3.167	339.7256	3103.84	V Q . . . .
3.250	361.5584	3170.12	V Q . . . .
3.333	383.8010	3229.63	V Q . . . .
3.417	406.4148	3283.53	.V Q . . . .
3.500	429.3469	3329.73	.V Q . . . .
3.583	452.5863	3374.37	.V Q . . . .
3.667	476.1157	3416.47	.V Q . . . .
3.750	499.9321	3458.14	.V Q . . . .
3.833	524.0257	3498.39	.V Q . . . .
3.917	548.3890	3537.55	.V Q . . . .

4.000	573.0164	3575.90	.V	Q	.	.	.	.
4.083	597.8634	3607.79	.V	Q	.	.	.	.
4.167	622.9199	3638.20	.V	Q	.	.	.	.
4.250	648.1880	3668.94	.V	Q	.	.	.	.
4.333	673.6604	3698.58	.V	Q	.	.	.	.
4.417	699.3032	3723.33	.V	Q	.	.	.	.
4.500	725.1118	3747.41	.V	Q	.	.	.	.
4.583	751.0884	3771.81	.V	Q	.	.	.	.
4.667	777.2330	3796.21	.V	Q	.	.	.	.
4.750	803.5480	3820.94	.V	Q	.	.	.	.
4.833	830.0306	3845.27	. V	Q	.	.	.	.
4.917	856.6409	3863.81	. V	Q	.	.	.	.
5.000	883.3644	3880.25	. V	Q	.	.	.	.
5.083	910.2033	3897.01	. V	Q	.	.	.	.
5.167	937.1575	3913.75	. V	Q	.	.	.	.
5.250	964.2291	3930.81	. V	Q	.	.	.	.
5.333	991.4183	3947.86	. V	Q	.	.	.	.
5.417	1018.7270	3965.23	. V	Q	.	.	.	.
5.500	1046.1553	3982.59	. V	Q	.	.	.	.
5.583	1073.7053	4000.28	. V	Q	.	.	.	.
5.667	1101.3772	4017.96	. V	Q	.	.	.	.
5.750	1129.1732	4035.98	. V	Q	.	.	.	.
5.833	1157.0935	4054.02	. V	Q	.	.	.	.
5.917	1185.1403	4072.39	. V	Q	.	.	.	.
6.000	1213.3134	4090.73	. V	Q	.	.	.	.
6.083	1241.6152	4109.44	. V	Q	.	.	.	.
6.167	1270.0460	4128.15	. V	Q	.	.	.	.
6.250	1298.6083	4147.23	. V	Q	.	.	.	.
6.333	1327.3019	4166.31	. V	Q	.	.	.	.
6.417	1356.1295	4185.78	. V	Q	.	.	.	.
6.500	1385.0913	4205.24	. V	Q	.	.	.	.
6.583	1414.1898	4225.11	. V	Q	.	.	.	.
6.667	1443.4252	4244.98	. V	Q	.	.	.	.
6.750	1472.8002	4265.26	. V	Q	.	.	.	.
6.833	1502.3149	4285.54	. V	Q	.	.	.	.
6.917	1531.9723	4306.25	. V	Q	.	.	.	.
7.000	1561.7723	4326.97	. V	Q	.	.	.	.
7.083	1591.7086	4346.75	. V	Q	.	.	.	.
7.167	1621.7722	4365.23	. V	Q	.	.	.	.
7.250	1651.9661	4384.15	. V	Q	.	.	.	.
7.333	1682.2904	4403.09	. V	Q	.	.	.	.
7.417	1712.7483	4422.48	. V	Q	.	.	.	.
7.500	1743.3397	4441.88	. V	Q	.	.	.	.
7.583	1774.0681	4461.76	. V	Q	.	.	.	.
7.667	1804.9335	4481.65	. V	Q	.	.	.	.
7.750	1835.9392	4502.03	. V	Q	.	.	.	.
7.833	1867.0854	4522.43	. V	Q	.	.	.	.
7.917	1898.3756	4543.34	. V	Q	.	.	.	.
8.000	1929.8099	4564.27	. V	Q	.	.	.	.
8.083	1961.3921	4585.74	. V	Q	.	.	.	.
8.167	1993.1223	4607.22	. V	Q.	.	.	.	.
8.250	2025.0043	4629.26	. V	Q.	.	.	.	.
8.333	2057.0383	4651.33	. V	Q.	.	.	.	.
8.417	2089.2283	4673.97	. V	Q.	.	.	.	.
8.500	2121.5742	4696.64	. V	Q.	.	.	.	.
8.583	2154.0806	4719.90	. V	Q.	.	.	.	.
8.667	2186.7473	4743.21	. V	Q.	.	.	.	.
8.750	2219.5789	4767.13	. V	Q.	.	.	.	.

8.833	2252.5754	4791.11	.	V	Q.	.	.	.
8.917	2285.7415	4815.72	.	V	Q.	.	.	.
9.000	2319.0774	4840.39	.	V	Q.	.	.	.
9.083	2352.5879	4865.73	.	V	Q.	.	.	.
9.167	2386.2734	4891.13	.	V	Q.	.	.	.
9.250	2420.1387	4917.22	.	V	Q.	.	.	.
9.333	2454.1841	4943.39	.	V	Q.	.	.	.
9.417	2488.4148	4970.28	.	V	Q.	.	.	.
9.500	2522.8313	4997.26	.	V	Q.	.	.	.
9.583	2557.4387	5024.99	.	V	Q.	.	.	.
9.667	2592.2378	5052.82	.	V	Q.	.	.	.
9.750	2627.2339	5081.43	.	V	Q.	.	.	.
9.833	2662.4277	5110.15	.	V	Q	.	.	.
9.917	2697.8252	5139.70	.	V	Q	.	.	.
10.000	2733.4268	5169.36	.	V	Q	.	.	.
10.083	2769.2385	5199.89	.	V	Q	.	.	.
10.167	2805.2615	5230.55	.	V	Q	.	.	.
10.250	2841.5020	5262.11	.	V	Q	.	.	.
10.333	2877.9609	5293.83	.	V	Q	.	.	.
10.417	2914.6448	5326.49	.	V	Q	.	.	.
10.500	2951.5547	5359.32	.	V	Q	.	.	.
10.583	2988.6975	5393.14	.	V	Q	.	.	.
10.667	3026.0747	5427.16	.	V	Q	.	.	.
10.750	3063.6934	5462.22	.	V	Q	.	.	.
10.833	3101.5549	5497.49	.	V	Q	.	.	.
10.917	3139.6667	5533.85	.	V	Q	.	.	.
11.000	3178.0308	5570.46	.	V	Q	.	.	.
11.083	3216.6548	5608.22	.	V	Q	.	.	.
11.167	3255.5408	5646.25	.	V	.Q	.	.	.
11.250	3294.6970	5685.49	.	V	.Q	.	.	.
11.333	3334.1257	5725.04	.	V	.Q	.	.	.
11.417	3373.8354	5765.86	.	V	.Q	.	.	.
11.500	3413.8289	5807.04	.	V	.Q	.	.	.
11.583	3454.1150	5849.56	.	V	.Q	.	.	.
11.667	3494.6968	5892.47	.	V	.Q	.	.	.
11.750	3535.5840	5936.81	.	V	.Q	.	.	.
11.833	3576.7793	5981.57	.	V	.Q	.	.	.
11.917	3618.2935	6027.86	.	V	.Q	.	.	.
12.000	3660.1299	6074.64	.	V	.Q	.	.	.
12.083	3702.3970	6137.17	.	V	. Q	.	.	.
12.167	3745.1953	6214.33	.	V	. Q	.	.	.
12.250	3788.5361	6293.08	.	V	. Q	.	.	.
12.333	3832.4224	6372.29	.	V	. Q	.	.	.
12.417	3876.8911	6456.85	.	V	. Q	.	.	.
12.500	3922.0176	6552.35	.	V	. Q	.	.	.
12.583	3967.8184	6650.27	.	V	. Q	.	.	.
12.667	4014.3933	6762.67	.	V	. Q	.	.	.
12.750	4061.9160	6900.30	.	V	Q	.	.	.
12.833	4110.5190	7057.17	.	V	Q	.	.	.
12.917	4160.3735	7238.85	.	V	Q	.	.	.
13.000	4211.5059	7424.43	.	V	Q	.	.	.
13.083	4263.9346	7612.67	.	V	Q	.	.	.
13.167	4317.9180	7838.42	.	V	Q	.	.	.
13.250	4373.2695	8037.03	.	V	Q	.	.	.
13.333	4430.0479	8244.21	.	V	Q	.	.	.
13.417	4488.4990	8487.13	.	.V	Q	.	.	.
13.500	4548.4258	8701.37	.	.V	Q	.	.	.
13.583	4609.9038	8926.64	.	.V	Q	.	.	.

13.667	4673.1050	9176.84	. .V Q . . .
13.750	4738.2261	9455.58	. .V Q . . .
13.833	4804.9375	9686.48	. .V Q . . .
13.917	4873.7109	9985.92	. . V Q. . .
14.000	4944.5220	10281.75	. . V Q . .
14.083	5017.6782	10622.32	. . V Q . .
14.167	5092.9214	10925.30	. . V .Q . .
14.250	5170.0859	11204.26	. . V .Q . .
14.333	5249.3423	11508.05	. . V . Q . .
14.417	5331.0078	11857.81	. . V . Q . .
14.500	5414.7798	12163.67	. . V . Q . .
14.583	5500.5874	12459.25	. . V . Q . .
14.667	5588.4746	12761.25	. . V . Q . .
14.750	5678.5493	13078.87	. . V . Q . .
14.833	5770.8413	13400.78	. . V . Q . .
14.917	5865.3037	13715.97	. . V . Q . .
15.000	5961.9307	14030.24	. . V . Q . .
15.083	6060.7344	14346.29	. . V . Q . .
15.167	6161.8984	14689.02	. . V . Q . .
15.250	6265.1187	14987.58	. . V . Q. .
15.333	6370.3311	15276.85	. . V . Q. .
15.417	6477.5576	15569.29	. . V . Q .
15.500	6586.3022	15789.73	. . V . Q .
15.583	6696.6118	16016.92	. . V . .Q .
15.667	6808.6216	16263.79	. . V . .Q .
15.750	6922.4199	16523.52	. . V . . Q .
15.833	7037.4434	16701.44	. . V . . Q .
15.917	7154.2402	16958.89	. . V . . Q .
16.000	7272.7607	17209.21	. . V . . Q .
16.083	7394.0293	17608.16	. . V . . Q .
16.167	7517.2446	17890.90	. . V . . Q .
16.250	7640.7925	17939.14	. . V . . Q .
16.333	7764.8506	18013.21	. . V. . Q .
16.417	7890.0566	18179.92	. . V. . Q .
16.500	8016.2866	18328.57	. . V. . Q .
16.583	8143.0518	18406.27	. . V . Q .
16.667	8271.5391	18656.40	. . V . Q .
16.750	8402.1475	18964.38	. . V . Q .
16.833	8534.6465	19238.84	. . .V . Q .
16.917	8668.9414	19499.56	. . .V . Q .
17.000	8803.2666	19504.08	. . .V . Q .
17.083	8937.2139	19449.08	. . . V . Q .
17.167	9074.0693	19871.35	. . . V . Q .
17.250	9208.0352	19451.82	. . . V . Q .
17.333	9342.3291	19499.45	. . . V . Q .
17.417	9478.2402	19734.35	. . . V . Q .
17.500	9611.8604	19401.65	. . . V . Q .
17.583	9746.4219	19538.36	. . . V . Q .
17.667	9882.6582	19781.52	. . . V . Q .
17.750	10020.1523	19964.13	. . . V . Q.
17.833	10153.7246	19394.73	. . . V . Q .
17.917	10292.7881	20192.06	. . . V . Q.
18.000	10431.2031	20097.84	. . . V . Q.
18.083	10571.0674	20308.30	. . . V . Q.
18.167	10705.2832	19488.15	. . . V . Q .
18.250	10837.9766	19267.08	. . . V . Q .
18.333	10973.0664	19615.03	. . . V . Q .
18.417	11111.0234	20031.31	. . . V . Q.

18.500	11243.8057	19280.00	. . . V . Q .
18.583	11374.9658	19044.51	. . . V . Q .
18.667	11504.6631	18832.07	. . . V . Q .
18.750	11632.6934	18590.00	. . . V . Q .
18.833	11758.5703	18277.34	. . . V. Q .
18.917	11880.3135	17677.06	. . . V. Q .
19.000	12000.4102	17437.98	. . . V. Q .
19.083	12118.7207	17178.75	. . . V. Q .
19.167	12234.1797	16764.60	. . . V Q .
19.250	12346.8340	16357.43	. . . V Q .
19.333	12456.0996	15865.30	. . . VQ .
19.417	12561.6641	15327.94	. . . QV .
19.500	12663.8477	14836.99	. . . Q.V .
19.583	12763.4404	14460.91	. . . Q .V .
19.667	12860.1338	14039.95	. . . Q .V .
19.750	12954.0938	13643.02	. . . Q . V .
19.833	13045.4961	13271.61	. . . Q . V .
19.917	13134.0029	12851.20	. . . Q . V .
20.000	13219.5947	12427.92	. . . Q . V .
20.083	13301.2646	11858.41	. . . Q . V .
20.167	13380.2100	11462.81	. . . Q . V .
20.250	13456.9023	11135.68	. . .Q . V .
20.333	13531.0742	10769.79	. . .Q . V .
20.417	13601.8682	10279.21	. . Q . V .
20.500	13670.4102	9952.31	. . Q. . V .
20.583	13736.9395	9660.12	. . Q . . V .
20.667	13801.5361	9379.50	. . Q . . V .
20.750	13864.1416	9090.29	. . Q . . V .
20.833	13924.7139	8795.04	. . Q . . V .
20.917	13982.7100	8420.97	. . Q . . V .
21.000	14038.7871	8142.46	. . Q . . V .
21.083	14093.3135	7917.17	. . Q . . V .
21.167	14146.3770	7704.76	. . Q . . V .
21.250	14197.9648	7490.62	. . Q . . V .
21.333	14248.1484	7286.63	. . Q . . V .
21.417	14297.0693	7103.36	. . Q . . V .
21.500	14344.8447	6936.98	. . Q . . V .
21.583	14391.5068	6775.37	. . Q . . V .
21.667	14437.1016	6620.37	. . Q . . V .
21.750	14481.6475	6468.02	. . Q . . V .
21.833	14525.1807	6321.04	. . Q . . V .
21.917	14567.8057	6189.10	. . Q . . V .
22.000	14609.5762	6065.04	. .Q . . V .
22.083	14650.5918	5955.52	. .Q . . V .
22.167	14690.8887	5851.12	. .Q . . V .
22.250	14730.4824	5749.00	. .Q . . V .
22.333	14769.4004	5650.94	. .Q . . V .
22.417	14807.7432	5567.42	. Q . . V .
22.500	14845.5537	5490.14	. Q . . V .
22.583	14882.8408	5414.08	. Q . . V .
22.667	14919.6113	5339.11	. Q . . V .
22.750	14955.8818	5266.54	. Q . . V .
22.833	14991.6709	5196.63	. Q . . V .
22.917	15027.0449	5136.37	. Q . . V .
23.000	15062.0117	5077.11	. Q. . . V .
23.083	15096.3818	4990.61	. Q. . . V .
23.167	15130.1992	4910.27	. Q. . . V .
23.250	15163.6660	4859.45	. Q. . . V .

23.333	15196.7959	4810.44	.	Q.	.	.	V .
23.417	15229.5791	4760.19	.	Q.	.	.	V .
23.500	15262.0020	4707.86	.	Q.	.	.	V .
23.583	15294.0693	4656.24	.	Q.	.	.	V .
23.667	15325.7861	4605.30	.	Q.	.	.	V .
23.750	15357.1572	4555.07	.	Q .	.	.	V .
23.833	15388.1865	4505.48	.	Q .	.	.	V .
23.917	15418.8789	4456.59	.	Q .	.	.	V .
24.000	15449.2393	4408.36	.	Q .	.	.	V .
24.083	15479.2334	4355.17	.	Q .	.	.	V .
24.167	15508.8281	4297.09	.	Q .	.	.	V .
24.250	15538.0293	4240.03	.	Q .	.	.	V .
24.333	15566.8447	4183.94	.	Q .	.	.	V .
24.417	15595.2656	4126.66	.	Q .	.	.	V .
24.500	15623.2559	4064.21	.	Q .	.	.	V .
24.583	15650.8203	4002.29	.	Q .	.	.	V .
24.667	15677.9082	3933.10	.	Q .	.	.	V .
24.750	15704.4316	3851.19	.	Q .	.	.	V .
24.833	15730.3223	3759.25	.	Q .	.	.	V .
24.917	15755.4932	3654.86	.	Q .	.	.	V .
25.000	15779.9375	3549.37	.	Q .	.	.	V.
25.083	15803.6748	3446.70	.	Q .	.	.	V.
25.167	15826.5781	3325.60	.	Q .	.	.	V.
25.250	15848.7705	3222.40	.	Q .	.	.	V.
25.333	15870.2256	3115.27	.	Q .	.	.	V.
25.417	15890.8145	2989.52	.	Q .	.	.	V.
25.500	15910.6602	2881.54	.	Q .	.	.	V.
25.583	15929.7324	2769.27	.	Q .	.	.	V.
25.667	15947.9395	2643.59	.	Q .	.	.	V.
25.750	15965.1816	2503.53	.	Q .	.	.	V.
25.833	15981.6582	2392.40	.	Q .	.	.	V.
25.917	15997.1104	2243.59	.	Q .	.	.	V.
26.000	16011.5596	2098.10	.	Q .	.	.	V.
26.083	16024.9053	1937.74	.	Q .	.	.	V.
26.167	16037.3652	1809.20	.	Q .	.	.	V.
26.250	16049.0459	1696.10	.	Q .	.	.	V.
26.333	16059.8525	1569.09	.	Q .	.	.	V.
26.417	16069.6270	1419.19	.	Q .	.	.	V.
26.500	16078.5938	1301.93	.	Q .	.	.	V.
26.583	16086.8047	1192.23	.	Q .	.	.	V.
26.667	16094.2959	1087.75	.	Q .	.	.	V.
26.750	16101.1133	989.90	.	Q .	.	.	V.
26.833	16107.3164	900.66	.	Q .	.	.	V.
26.917	16113.0312	829.74	.	Q .	.	.	V.
27.000	16118.2627	759.67	.	Q .	.	.	V.
27.083	16123.0020	688.08	.	Q .	.	.	V.
27.167	16127.2871	622.17	.	Q .	.	.	V.
27.250	16131.1562	561.80	.	Q .	.	.	V.
27.333	16134.6602	508.72	Q	.	.	.	V.
27.417	16137.8418	461.96	Q	.	.	.	V.
27.500	16140.7568	423.29	Q	.	.	.	V.
27.583	16143.4209	386.79	Q	.	.	.	V.
27.667	16145.8525	353.12	Q	.	.	.	V.
27.750	16148.0596	320.46	Q	.	.	.	V.
27.833	16150.0537	289.48	Q	.	.	.	V.
27.917	16151.8457	260.13	Q	.	.	.	V.
28.000	16153.4424	231.83	Q	.	.	.	V.
28.083	16154.8926	210.50	Q	.	.	.	V.

28.167	16156.2070	190.82	Q	.	.	.	V.
28.250	16157.3867	171.27	Q	.	.	.	V.
28.333	16158.4404	152.94	Q	.	.	.	V.
28.417	16159.4043	139.96	Q	.	.	.	V.
28.500	16160.2842	127.74	Q	.	.	.	V.
28.583	16161.0801	115.59	Q	.	.	.	V.
28.667	16161.7930	103.53	Q	.	.	.	V.
28.750	16162.4238	91.53	Q	.	.	.	V.
28.833	16162.9746	80.02	Q	.	.	.	V.
28.917	16163.4893	74.69	Q	.	.	.	V.
29.000	16163.9814	71.49	Q	.	.	.	V.
29.083	16164.4521	68.30	Q	.	.	.	V.
29.167	16164.9004	65.15	Q	.	.	.	V.
29.250	16165.3271	62.02	Q	.	.	.	V.
29.333	16165.7324	58.90	Q	.	.	.	V.
29.417	16166.1172	55.82	Q	.	.	.	V.
29.500	16166.4805	52.75	Q	.	.	.	V.
29.583	16166.8232	49.72	Q	.	.	.	V.
29.667	16167.1445	46.69	Q	.	.	.	V.
29.750	16167.4453	43.70	Q	.	.	.	V.
29.833	16167.7256	40.71	Q	.	.	.	V.
29.917	16167.9854	37.76	Q	.	.	.	V.
30.000	16168.2256	34.85	Q	.	.	.	V.
30.083	16168.4453	31.95	Q	.	.	.	V.
30.167	16168.6455	29.08	Q	.	.	.	V.
30.250	16168.8262	26.22	Q	.	.	.	V.
30.333	16168.9873	23.38	Q	.	.	.	V.
30.417	16169.1289	20.56	Q	.	.	.	V.
30.500	16169.2510	17.76	Q	.	.	.	V.
30.583	16169.3545	14.98	Q	.	.	.	V.
30.667	16169.4385	12.21	Q	.	.	.	V.
30.750	16169.5039	9.46	Q	.	.	.	V.
30.833	16169.5498	6.73	Q	.	.	.	V.
30.917	16169.5771	4.01	Q	.	.	.	V.
31.000	16169.5859	1.31	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%	1860.0
10%	1425.0
20%	1120.0
30%	595.0
40%	465.0
50%	390.0
60%	330.0
70%	275.0
80%	220.0
90%	140.0

END OF FLOODSCx ROUTING ANALYSIS

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

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




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 BODR 2022 - NODE 127                                         *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 100-YR EV DEC 2022 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV00127S.DAT
  TIME/DATE OF STUDY: 13:18 12/12/2022


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    127.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   53506.199 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.156 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.287
         LOW LOSS FRACTION = 0.393
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.50
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.95
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.31
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.45
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.64
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  6.39

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.331
          30-MINUTE FACTOR = 0.383
           1-HOUR FACTOR = 0.424
           3-HOUR FACTOR = 0.773
           6-HOUR FACTOR = 0.898
          24-HOUR FACTOR = 0.941

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.865
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.221	1429.213
2	0.663	2858.428
3	1.104	2858.426
4	1.546	2858.425
5	2.014	3024.833
6	2.654	4142.214
7	3.326	4349.780
8	4.068	4801.262
9	5.233	7541.589
10	6.621	8982.476
11	8.338	11108.327
12	10.343	12975.143
13	12.282	12548.026
14	14.432	13907.324
15	16.957	16340.054
16	19.019	13344.479
17	21.366	15188.415
18	24.153	18033.000
19	26.432	14747.043
20	28.911	16041.883
21	31.744	18333.930
22	35.051	21398.590
23	37.522	15989.367
24	41.000	22501.941
25	44.482	22534.229
26	48.297	24685.387
27	51.765	22444.523
28	54.518	17813.406
29	57.341	18267.109
30	60.892	22977.908
31	64.321	22188.670
32	66.984	17234.850
33	69.793	18172.912
34	72.221	15713.986
35	74.673	15865.203
36	76.761	13509.705
37	78.480	11123.549
38	80.217	11239.221
39	82.003	11556.417
40	83.646	10635.930
41	85.158	9783.326
42	86.509	8739.416
43	87.690	7644.854
44	88.679	6399.074
45	89.588	5884.895
46	90.446	5545.631
47	91.259	5266.053
48	92.059	5177.782

49	92.802	4805.835
50	93.539	4765.747
51	94.181	4157.619
52	94.674	3189.688
53	95.165	3175.025
54	95.656	3178.284
55	96.087	2787.527
56	96.394	1986.415
57	96.697	1961.879
58	97.000	1961.928
59	97.303	1960.249
60	97.606	1961.879
61	97.905	1934.133
62	98.051	944.974
63	98.123	467.575
64	98.196	469.204
65	98.268	469.253
66	98.341	469.204
67	98.413	464.316
68	98.486	472.512
69	98.558	467.575
70	98.630	465.946
71	98.703	474.141
72	98.775	464.316
73	98.848	474.091
74	98.920	464.316
75	98.993	470.882
76	99.065	470.833
77	99.138	470.833
78	99.211	470.833
79	99.284	470.833
80	99.357	470.833
81	99.429	470.833
82	99.502	470.833
83	99.575	470.833
84	99.648	470.833
85	99.720	470.833
86	99.793	470.833
87	99.866	470.833
88	99.939	470.833
89	100.000	397.076

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 10344.1465

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 16437.4082

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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. 5100.0 10200.0 15300.0 20400.0
0.083	0.0547	7.94	Q . . . .
0.167	0.2189	23.84	Q . . . .
0.250	0.4928	39.78	Q . . . .
0.333	0.8769	55.77	Q . . . .
0.417	1.3778	72.73	Q . . . .
0.500	2.0387	95.95	Q . . . .
0.583	2.8678	120.39	Q . . . .
0.667	3.8831	147.42	Q . . . .
0.750	5.1898	189.74	Q . . . .
0.833	6.8440	240.19	Q . . . .
0.917	8.9280	302.60	Q . . . .
1.000	11.5145	375.55	Q . . . .
1.083	14.5886	446.36	Q . . . .
1.167	18.2038	524.93	VQ . . . .
1.250	22.4548	617.25	VQ . . . .
1.333	27.2289	693.20	VQ . . . .
1.417	32.5984	779.65	VQ . . . .
1.500	38.6737	882.14	VQ . . . .
1.583	45.3315	966.70	VQ . . . .
1.667	52.6229	1058.72	V Q . . . .
1.750	60.6377	1163.75	V Q . . . .
1.833	69.4954	1286.14	V Q . . . .
1.917	78.9915	1378.83	V Q . . . .
2.000	89.3775	1508.05	V Q . . . .
2.083	100.6570	1637.77	V Q . . . .
2.167	112.9154	1779.93	V Q . . . .
2.250	126.0697	1910.00	V Q . . . .
2.333	139.9461	2014.85	V Q . . . .
2.417	154.5637	2122.49	V Q . . . .
2.500	170.1059	2256.73	V Q . . . .
2.583	186.5447	2386.91	V Q . . . .
2.667	203.6941	2490.10	V Q . . . .
2.750	221.5919	2598.77	V Q . . . .
2.833	240.1471	2694.21	V Q . . . .
2.917	259.3673	2790.77	V Q . . . .
3.000	279.1651	2874.63	V Q . . . .
3.083	299.4508	2945.48	V Q . . . .
3.167	320.2311	3017.31	V Q . . . .
3.250	341.5197	3091.10	V Q . . . .
3.333	363.2836	3160.11	V Q . . . .
3.417	385.4915	3224.59	V Q . . . .
3.500	408.1057	3283.59	V Q . . . .
3.583	431.0857	3336.68	.V Q . . . .
3.667	454.3855	3383.14	.V Q . . . .
3.750	477.9867	3426.89	.V Q . . . .
3.833	501.8780	3469.01	.V Q . . . .
3.917	526.0496	3509.72	.V Q . . . .

4.000	550.4999	3550.19	.V	Q	.	.	.	.
4.083	575.2157	3588.73	.V	Q	.	.	.	.
4.167	600.1971	3627.29	.V	Q	.	.	.	.
4.250	625.4216	3662.61	.V	Q	.	.	.	.
4.333	650.8542	3692.80	.V	Q	.	.	.	.
4.417	676.4948	3723.02	.V	Q	.	.	.	.
4.500	702.3453	3753.49	.V	Q	.	.	.	.
4.583	728.3914	3781.90	.V	Q	.	.	.	.
4.667	754.6041	3806.10	.V	Q	.	.	.	.
4.750	780.9833	3830.25	.V	Q	.	.	.	.
4.833	807.5304	3854.64	.V	Q	.	.	.	.
4.917	834.2461	3879.12	. V	Q	.	.	.	.
5.000	861.1320	3903.84	. V	Q	.	.	.	.
5.083	888.1878	3928.50	. V	Q	.	.	.	.
5.167	915.3773	3947.92	. V	Q	.	.	.	.
5.250	942.6829	3964.77	. V	Q	.	.	.	.
5.333	970.1062	3981.86	. V	Q	.	.	.	.
5.417	997.6477	3999.03	. V	Q	.	.	.	.
5.500	1025.3091	4016.43	. V	Q	.	.	.	.
5.583	1053.0907	4033.89	. V	Q	.	.	.	.
5.667	1080.9945	4051.64	. V	Q	.	.	.	.
5.750	1109.0210	4069.45	. V	Q	.	.	.	.
5.833	1137.1718	4087.49	. V	Q	.	.	.	.
5.917	1165.4478	4105.68	. V	Q	.	.	.	.
6.000	1193.8503	4124.06	. V	Q	.	.	.	.
6.083	1222.3806	4142.60	. V	Q	.	.	.	.
6.167	1251.0400	4161.34	. V	Q	.	.	.	.
6.250	1279.8295	4180.23	. V	Q	.	.	.	.
6.333	1308.7509	4199.39	. V	Q	.	.	.	.
6.417	1337.8049	4218.65	. V	Q	.	.	.	.
6.500	1366.9935	4238.19	. V	Q	.	.	.	.
6.583	1396.3176	4257.85	. V	Q	.	.	.	.
6.667	1425.7789	4277.79	. V	Q	.	.	.	.
6.750	1455.3785	4297.86	. V	Q	.	.	.	.
6.833	1485.1183	4318.21	. V	Q	.	.	.	.
6.917	1514.9991	4338.70	. V	Q	.	.	.	.
7.000	1545.0232	4359.49	. V	Q	.	.	.	.
7.083	1575.1914	4380.42	. V	Q	.	.	.	.
7.167	1605.5059	4401.66	. V	Q	.	.	.	.
7.250	1635.9675	4423.03	. V	Q	.	.	.	.
7.333	1666.5787	4444.75	. V	Q	.	.	.	.
7.417	1697.3375	4466.19	. V	Q	.	.	.	.
7.500	1728.2312	4485.76	. V	Q	.	.	.	.
7.583	1759.2607	4505.48	. V	Q	.	.	.	.
7.667	1790.4285	4525.55	. V	Q	.	.	.	.
7.750	1821.7354	4545.77	. V	Q	.	.	.	.
7.833	1853.1840	4566.34	. V	Q	.	.	.	.
7.917	1884.7754	4587.08	. V	Q	.	.	.	.
8.000	1916.5122	4608.19	. V	Q.	.	.	.	.
8.083	1948.3956	4629.47	. V	Q.	.	.	.	.
8.167	1980.4282	4651.13	. V	Q.	.	.	.	.
8.250	2012.6112	4672.97	. V	Q.	.	.	.	.
8.333	2044.9474	4695.21	. V	Q.	.	.	.	.
8.417	2077.4380	4717.64	. V	Q.	.	.	.	.
8.500	2110.0859	4740.49	. V	Q.	.	.	.	.
8.583	2142.8926	4763.53	. V	Q.	.	.	.	.
8.667	2175.8611	4787.02	. V	Q.	.	.	.	.
8.750	2208.9927	4810.71	. V	Q.	.	.	.	.

8.833	2242.2905	4834.86	.	V	Q.	.	.	.
8.917	2275.7563	4859.22	.	V	Q.	.	.	.
9.000	2309.3931	4884.07	.	V	Q.	.	.	.
9.083	2343.2026	4909.14	.	V	Q.	.	.	.
9.167	2377.1882	4934.72	.	V	Q.	.	.	.
9.250	2411.3518	4960.53	.	V	Q.	.	.	.
9.333	2445.6965	4986.87	.	V	Q.	.	.	.
9.417	2480.2246	5013.47	.	V	Q.	.	.	.
9.500	2514.9397	5040.62	.	V	Q.	.	.	.
9.583	2549.8435	5068.03	.	V	Q.	.	.	.
9.667	2584.9402	5096.02	.	V	Q.	.	.	.
9.750	2620.2314	5124.30	.	V	Q	.	.	.
9.833	2655.7217	5153.18	.	V	Q	.	.	.
9.917	2691.4131	5182.38	.	V	Q	.	.	.
10.000	2727.3098	5212.20	.	V	Q	.	.	.
10.083	2763.4141	5242.35	.	V	Q	.	.	.
10.167	2799.7307	5273.16	.	V	Q	.	.	.
10.250	2836.2620	5304.33	.	V	Q	.	.	.
10.333	2873.0127	5336.19	.	V	Q	.	.	.
10.417	2909.9854	5368.42	.	V	Q	.	.	.
10.500	2947.1851	5401.40	.	V	Q	.	.	.
10.583	2984.6145	5434.76	.	V	Q	.	.	.
10.667	3022.2791	5468.91	.	V	Q	.	.	.
10.750	3060.1819	5503.48	.	V	Q	.	.	.
10.833	3098.3284	5538.87	.	V	Q	.	.	.
10.917	3136.7217	5574.72	.	V	Q	.	.	.
11.000	3175.3679	5611.43	.	V	.Q	.	.	.
11.083	3214.2703	5648.63	.	V	.Q	.	.	.
11.167	3253.4353	5686.76	.	V	.Q	.	.	.
11.250	3292.8665	5725.41	.	V	.Q	.	.	.
11.333	3332.5706	5765.03	.	V	.Q	.	.	.
11.417	3372.5515	5805.23	.	V	.Q	.	.	.
11.500	3412.8164	5846.45	.	V	.Q	.	.	.
11.583	3453.3694	5888.30	.	V	.Q	.	.	.
11.667	3494.2180	5931.24	.	V	.Q	.	.	.
11.750	3535.3672	5974.84	.	V	.Q	.	.	.
11.833	3576.8247	6019.62	.	V	.Q	.	.	.
11.917	3618.5955	6065.13	.	V	.Q	.	.	.
12.000	3660.6882	6111.88	.	V	.Q	.	.	.
12.083	3703.2041	6173.29	.	V	.Q	.	.	.
12.167	3746.2471	6249.86	.	V	.Q	.	.	.
12.250	3789.8225	6327.14	.	V	.Q	.	.	.
12.333	3833.9390	6405.72	.	V	.Q	.	.	.
12.417	3878.6130	6486.69	.	V	.Q	.	.	.
12.500	3923.9290	6579.88	.	V	.Q	.	.	.
12.583	3969.9062	6675.90	.	V	.Q	.	.	.
12.667	4016.5847	6777.70	.	V	.Q	.	.	.
12.750	4064.1531	6906.94	.	V	.Q	.	.	.
12.833	4112.7173	7051.56	.	V	.Q	.	.	.
12.917	4162.4248	7217.51	.	V	.Q	.	.	.
13.000	4213.4092	7402.92	.	V	.Q	.	.	.
13.083	4265.6460	7584.76	.	V	.Q	.	.	.
13.167	4319.2349	7781.12	.	V	.Q	.	.	.
13.250	4374.3433	8001.71	.	V	.Q	.	.	.
13.333	4430.7793	8194.51	.	V	.Q	.	.	.
13.417	4488.6704	8405.82	.	V	.Q	.	.	.
13.500	4548.2178	8646.26	.	V	.Q	.	.	.
13.583	4609.2046	8855.29	.	V	.Q	.	.	.

13.667	4671.7285	9078.46	. .V Q . . .
13.750	4735.9473	9324.59	. .V Q . . .
13.833	4802.0771	9602.03	. .V Q . . .
13.917	4869.7598	9827.53	. .V Q. . .
14.000	4939.4424	10117.92	. . V Q. . .
14.083	5011.2334	10424.09	. . V Q . .
14.167	5085.3853	10766.84	. . V .Q . .
14.250	5161.7456	11087.50	. . V .Q . .
14.333	5240.0068	11363.51	. . V . Q . .
14.417	5320.2109	11645.61	. . V . Q . .
14.500	5402.7554	11985.47	. . V . Q . .
14.583	5487.5986	12319.27	. . V . Q . .
14.667	5574.4399	12609.35	. . V . Q . .
14.750	5663.5312	12936.09	. . V . Q . .
14.833	5754.8042	13252.80	. . V . Q . .
14.917	5848.4014	13590.33	. . V . Q . .
15.000	5944.2827	13921.94	. . V . Q . .
15.083	6042.2285	14221.72	. . V . Q . .
15.167	6142.3213	14533.47	. . V . Q . .
15.250	6244.7222	14868.61	. . V . Q. .
15.333	6349.1245	15159.21	. . V . Q. .
15.417	6455.4277	15435.26	. . V . Q .
15.500	6563.6104	15708.10	. . V . Q .
15.583	6673.3423	15933.11	. . V . .Q .
15.667	6784.6313	16159.20	. . V . .Q .
15.750	6897.5220	16391.74	. . V . . Q .
15.833	7012.0488	16629.27	. . V . . Q .
15.917	7127.8364	16812.39	. . V . . Q .
16.000	7245.4385	17075.82	. . V . . Q .
16.083	7365.6714	17457.84	. . V . . Q .
16.167	7488.3442	17812.12	. . V . . Q .
16.250	7611.8857	17938.25	. . V . . Q .
16.333	7735.7441	17984.27	. . V . . Q .
16.417	7860.2441	18077.41	. . V. . Q .
16.500	7986.4341	18322.77	. . V. . Q .
16.583	8113.3604	18429.68	. . V. . Q .
16.667	8241.2715	18572.69	. . V . Q .
16.750	8371.9424	18973.42	. . V . Q .
16.833	8503.9561	19168.40	. . V . Q .
16.917	8638.0840	19475.38	. . .V . Q .
17.000	8773.7920	19704.84	. . .V . Q .
17.083	8909.0557	19640.27	. . .V . Q .
17.167	9044.8135	19712.11	. . . V . Q .
17.250	9182.4834	19989.72	. . . V . Q.
17.333	9317.5576	19612.84	. . . V . Q .
17.417	9453.7393	19773.59	. . . V . Q .
17.500	9591.1719	19955.25	. . . V . Q.
17.583	9725.9639	19571.85	. . . V . Q .
17.667	9861.9375	19743.44	. . . V . Q .
17.750	9999.5176	19976.69	. . . V . Q.
17.833	10138.6914	20208.03	. . . V . Q.
17.917	10273.0742	19512.39	. . . V . Q .
18.000	10412.6035	20259.60	. . . V . Q.
18.083	10551.7939	20210.52	. . . V . Q.
18.167	10692.0840	20370.14	. . . V . Q.
18.250	10829.0098	19881.67	. . . V . Q .
18.333	10962.3242	19357.31	. . . V . Q .
18.417	11096.4102	19469.32	. . . V . Q .

18.500	11234.0391	19983.71	. . . V . Q.
18.583	11370.4541	19807.44	. . . V . Q .
18.667	11502.1709	19125.33	. . . V . Q .
18.750	11633.5244	19072.48	. . . V . Q .
18.833	11761.9453	18646.78	. . . V . Q .
18.917	11889.6582	18543.88	. . . V . Q .
19.000	12013.7432	18017.12	. . . V. Q .
19.083	12134.5566	17542.13	. . . V. Q .
19.167	12253.5752	17281.46	. . . V. Q .
19.250	12370.8135	17023.05	. . . V Q .
19.333	12485.5752	16663.34	. . . V Q .
19.417	12597.4961	16250.88	. . . VQ .
19.500	12705.7822	15723.22	. . . Q .
19.583	12810.7041	15234.60	. . . Q.V .
19.667	12912.4453	14772.86	. . . Q .V .
19.750	13011.3184	14356.33	. . . Q .V .
19.833	13107.3232	13939.87	. . . Q .V .
19.917	13200.8076	13573.97	. . . Q . V .
20.000	13291.6084	13184.34	. . . Q . V .
20.083	13379.5771	12773.06	. . . Q . V .
20.167	13464.6982	12359.51	. . . Q . V .
20.250	13546.5850	11889.99	. . . Q . V .
20.333	13625.4053	11444.71	. . . Q . V .
20.417	13701.9121	11108.74	. . .Q . V .
20.500	13775.9072	10744.04	. . .Q . V .
20.583	13847.1816	10349.02	. . Q . V .
20.667	13915.7900	9961.94	. . Q. . V .
20.750	13982.3398	9662.99	. . Q . . V .
20.833	14047.0723	9399.09	. . Q . . V .
20.917	14109.9805	9134.28	. . Q . . V .
21.000	14171.1055	8875.35	. . Q . . V .
21.083	14230.5234	8627.52	. . Q . . V .
21.167	14287.5000	8273.05	. . Q . . V .
21.250	14342.5312	7990.59	. . Q . . V .
21.333	14396.1533	7785.91	. . Q . . V .
21.417	14448.4453	7592.79	. . Q . . V .
21.500	14499.3848	7396.36	. . Q . . V .
21.583	14549.0332	7208.97	. . Q . . V .
21.667	14597.5498	7044.57	. . Q . . V .
21.750	14644.9707	6885.54	. . Q . . V .
21.833	14691.3340	6731.98	. . Q . . V .
21.917	14736.6758	6583.65	. . Q . . V .
22.000	14781.0000	6435.84	. . Q . . V .
22.083	14824.3574	6295.52	. . Q . . V .
22.167	14866.8184	6165.26	. . Q . . V .
22.250	14908.4854	6050.04	. .Q . . V .
22.333	14949.4336	5945.69	. .Q . . V .
22.417	14989.6816	5843.95	. .Q . . V .
22.500	15029.2432	5744.27	. .Q . . V .
22.583	15068.1592	5650.57	. .Q . . V .
22.667	15106.4971	5566.64	. Q . . V .
22.750	15144.2793	5485.96	. Q . . V .
22.833	15181.5566	5412.61	. Q . . V .
22.917	15218.3359	5340.42	. Q . . . V .
23.000	15254.6250	5269.16	. Q . . . V .
23.083	15290.4336	5199.39	. Q . . . V .
23.167	15325.8477	5142.11	. Q . . . V .
23.250	15360.8984	5089.44	. Q. . . . V .

23.333	15395.5713	5034.45	. Q.	.	.	V	.
23.417	15429.7939	4969.20	. Q.	.	.	V	.
23.500	15463.3457	4871.73	. Q.	.	.	V	.
23.583	15496.5635	4823.27	. Q.	.	.	V	.
23.667	15529.4561	4776.00	. Q.	.	.	V	.
23.750	15562.0322	4730.07	. Q.	.	.	V	.
23.833	15594.2646	4680.09	. Q.	.	.	V	.
23.917	15626.1562	4630.61	. Q.	.	.	V	.
24.000	15657.7119	4581.84	. Q .	.	.	V	.
24.083	15688.8799	4525.65	. Q .	.	.	V	.
24.167	15719.6113	4462.27	. Q .	.	.	V	.
24.250	15749.9111	4399.51	. Q .	.	.	V	.
24.333	15779.7832	4337.41	. Q .	.	.	V	.
24.417	15809.2314	4275.82	. Q .	.	.	V	.
24.500	15838.2461	4212.89	. Q .	.	.	V	.
24.583	15866.8262	4149.82	. Q .	.	.	V	.
24.667	15894.9609	4085.21	. Q .	.	.	V	.
24.750	15922.5527	4006.33	. Q .	.	.	V	.
24.833	15949.5527	3920.45	. Q .	.	.	V	.
24.917	15975.8877	3823.78	. Q .	.	.	V	.
25.000	16001.4922	3717.79	. Q .	.	.	V	.
25.083	16026.3906	3615.22	. Q .	.	.	V	.
25.167	16050.5371	3506.13	. Q .	.	.	V	.
25.250	16073.8467	3384.57	. Q .	.	.	V	.
25.333	16096.4414	3280.70	. Q .	.	.	V	.
25.417	16118.2617	3168.27	. Q .	.	.	V	.
25.500	16139.2324	3044.92	. Q .	.	.	V	.
25.583	16159.4863	2940.87	. Q .	.	.	V	.
25.667	16178.9805	2830.60	. Q .	.	.	V	.
25.750	16197.6348	2708.59	. Q .	.	.	V	.
25.833	16215.3389	2570.60	. Q .	.	.	V	.
25.917	16232.3066	2463.70	. Q .	.	.	V	.
26.000	16248.2959	2321.57	. Q .	.	.	V	.
26.083	16263.3125	2180.34	. Q .	.	.	V	.
26.167	16277.2812	2028.24	. Q .	.	.	V	.
26.250	16290.2959	1889.66	. Q .	.	.	V	.
26.333	16302.5391	1777.77	. Q .	.	.	V	.
26.417	16314.0000	1664.19	. Q .	.	.	V	.
26.500	16324.5049	1525.32	. Q .	.	.	V	.
26.583	16334.0898	1391.80	. Q .	.	.	V	.
26.667	16342.9512	1286.66	. Q .	.	.	V	.
26.750	16351.0576	1177.06	. Q .	.	.	V	.
26.833	16358.5088	1081.86	. Q .	.	.	V	.
26.917	16365.3027	986.48	.Q .	.	.	V	.
27.000	16371.5342	904.81	.Q .	.	.	V	.
27.083	16377.2979	836.94	.Q .	.	.	V	.
27.167	16382.5938	768.91	.Q .	.	.	V	.
27.250	16387.4121	699.59	.Q .	.	.	V	.
27.333	16391.7910	635.85	.Q .	.	.	V	.
27.417	16395.7676	577.27	.Q .	.	.	V	.
27.500	16399.3828	524.88	.Q .	.	.	V	.
27.583	16402.6816	478.91	Q .	.	.	V	.
27.667	16405.7129	440.16	Q .	.	.	V	.
27.750	16408.4980	404.54	Q .	.	.	V	.
27.833	16411.0527	371.04	Q .	.	.	V	.
27.917	16413.3906	339.32	Q .	.	.	V	.
28.000	16415.5137	308.31	Q .	.	.	V	.
28.083	16417.4395	279.57	Q .	.	.	V	.

28.167	16419.1699	251.25	Q .	.	.	V	.
28.250	16420.7305	226.49	Q .	.	.	V	.
28.333	16422.1582	207.27	Q .	.	.	V	.
28.417	16423.4551	188.25	Q .	.	.	V	.
28.500	16424.6211	169.35	Q .	.	.	V	.
28.583	16425.6738	152.74	Q .	.	.	V	.
28.667	16426.6426	140.69	Q .	.	.	V	.
28.750	16427.5293	128.85	Q .	.	.	V	.
28.833	16428.3359	117.10	Q .	.	.	V	.
28.917	16429.0625	105.43	Q .	.	.	V	.
29.000	16429.7090	93.83	Q .	.	.	V	.
29.083	16430.2773	82.47	Q .	.	.	V	.
29.167	16430.8047	76.66	Q .	.	.	V	.
29.250	16431.3105	73.54	Q .	.	.	V	.
29.333	16431.7949	70.44	Q .	.	.	V	.
29.417	16432.2598	67.36	Q .	.	.	V	.
29.500	16432.7031	64.31	Q .	.	.	V	.
29.583	16433.1250	61.30	Q .	.	.	V	.
29.667	16433.5254	58.28	Q .	.	.	V	.
29.750	16433.9062	55.30	Q .	.	.	V	.
29.833	16434.2676	52.35	Q .	.	.	V	.
29.917	16434.6074	49.39	Q .	.	.	V	.
30.000	16434.9277	46.49	Q .	.	.	V	.
30.083	16435.2285	43.57	Q .	.	.	V	.
30.167	16435.5098	40.71	Q .	.	.	V	.
30.250	16435.7695	37.84	Q .	.	.	V	.
30.333	16436.0098	35.00	Q .	.	.	V	.
30.417	16436.2305	32.17	Q .	.	.	V	.
30.500	16436.4336	29.36	Q .	.	.	V	.
30.583	16436.6172	26.56	Q .	.	.	V	.
30.667	16436.7812	23.79	Q .	.	.	V	.
30.750	16436.9258	21.03	Q .	.	.	V	.
30.833	16437.0527	18.29	Q .	.	.	V	.
30.917	16437.1602	15.57	Q .	.	.	V	.
31.000	16437.2480	12.87	Q .	.	.	V	.
31.083	16437.3184	10.18	Q .	.	.	V	.
31.167	16437.3691	7.51	Q .	.	.	V	.
31.250	16437.4023	4.85	Q .	.	.	V	.
31.333	16437.4180	2.21	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%	1880.0
10%	1425.0
20%	1135.0
30%	615.0
40%	475.0
50%	395.0
60%	340.0
70%	280.0
80%	220.0
90%	145.0

END OF FLOODSCx ROUTING ANALYSIS

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                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
 * RMV PA-3 ROMP AMENDMENT 2022 - NODE 137                               *
 * PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
 * 100-YR EV AUG 2023 ROKAMOTO                                           *
 ************************************************************************

  FILE NAME: EV00137S.DAT
  TIME/DATE OF STUDY: 13:19 08/10/2023


                        ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    137.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   67798.297 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.479 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.285; LOW LOSS FRACTION = 0.394
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.48; 30-MINUTE =  0.93;  1-HOUR =  1.28
    3-HOUR =  2.34;    6-HOUR =  3.45; 24-HOUR =  5.99
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933
============================================================================
```



```
 +--------------------------------------------------------------------------------
--------------------------------------+
 |                                       * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV00137S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+-----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+-----------------------+-
-----------+-------------+-----------+
 | 10100.00     137.00| Subarea (UH) Added to Stream #1|       0.0     22982.5|
18.083 |             |           |
 +--------------------+--------------------------------+-----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                          |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                  |
 +--------------------------------------------------------------------------------
--------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
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                           Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
 * RMV PA-3 ROMP AMENDMENT 2022 - NODE 138                                  *
 * PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
 * 100-YR EV AUG 2023 ROKAMOTO                                              *
 **************************************************************************

  FILE NAME: EV00138S.DAT
  TIME/DATE OF STUDY: 13:18 08/10/2023


                          ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    138.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   69102.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.577 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284; LOW LOSS FRACTION = 0.395
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.48; 30-MINUTE =  0.93;  1-HOUR =  1.27
    3-HOUR =  2.33;    6-HOUR =  3.43; 24-HOUR =  5.96
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932
============================================================================
```



```
 +--------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV00138S.DAT   ]
Page:   1 of    |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     138.00| Subarea (UH) Added to Stream #1|       0.0     23081.5|
18.167 |             |           |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                             |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                     |
 +--------------------------------------------------------------------------------
------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 100-YR EV AUG 2023 ROKAMOTO                                            *
 **************************************************************************

  FILE NAME: EV00139S.DAT
  TIME/DATE OF STUDY: 13:18 08/10/2023


                        ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    139.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   69529.797 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.624 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284; LOW LOSS FRACTION = 0.395
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.48; 30-MINUTE =  0.93;  1-HOUR =  1.27
    3-HOUR =  2.33;    6-HOUR =  3.43; 24-HOUR =  5.95
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932
==========================================================================
```



```
 +--------------------------------------------------------------------------------
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 |                                    * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV00139S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 | 10100.00     139.00| Subarea (UH) Added to Stream #1|       0.0     22958.9|
18.417 |             |           |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +--------------------------------------------------------------------------------
----------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 2-YR EV DEC 2022 ROKAMOTO                                             *
 **************************************************************************

  FILE NAME: EV0233CS.DAT
  TIME/DATE OF STUDY: 16:41 12/12/2022


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  13010.00 TO NODE    133.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   60992.301 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    5.932 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.574; LOW LOSS FRACTION = 0.911
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.15; 30-MINUTE =  0.29;  1-HOUR =  0.41
    3-HOUR =  0.75;    6-HOUR =  1.09; 24-HOUR =  1.91
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0233CS.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 13010.00     133.00| Subarea (UH) Added to Stream #1|       0.0       736.3|
20.833 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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            Ver. 20.0  Release Date: 06/01/2013  License ID 1237

                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T                              *
* PHASE NO PA 45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL           *
* 2-YR EV OCT 2022 ROKAMOTO                                             *
 ************************************************************************

  FILE NAME: EV0233TS.DAT
  TIME/DATE OF STUDY: 13:44 10/25/2022


**************************************************************************
  FLOW PROCESS FROM NODE  13010.00 TO NODE    133.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    6638.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.853 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.478
         LOW LOSS FRACTION = 0.810
         *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 = 0.744
          30-MINUTE FACTOR = 0.744
           1-HOUR FACTOR = 0.744
           3-HOUR FACTOR = 0.959
           6-HOUR FACTOR = 0.978
          24-HOUR FACTOR = 0.987

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.497
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.257	206.308
2	0.771	412.617
3	1.285	412.616
4	1.800	413.888
5	2.476	542.385
6	3.258	627.894
7	4.140	708.122
8	5.519	1107.070
9	7.256	1394.265
10	9.447	1758.960
11	11.735	1837.109
12	14.148	1936.750
13	17.046	2326.428
14	19.468	1944.901
15	22.414	2364.829
16	25.404	2400.251
17	28.097	2162.063
18	31.353	2613.814
19	35.102	3009.855
20	38.128	2429.060
21	42.229	3292.887
22	46.348	3306.181
23	50.801	3575.020
24	54.094	2643.950
25	57.370	2630.025
26	61.528	3338.172
27	65.245	2983.458
28	68.363	2503.089
29	71.423	2456.944
30	74.244	2264.351
31	76.733	1998.891
32	78.739	1609.835
33	80.782	1640.257
34	82.802	1621.778
35	84.628	1466.272
36	86.262	1311.734
37	87.650	1114.309
38	88.799	922.023
39	89.850	843.489
40	90.819	778.197
41	91.763	757.722
42	92.644	707.859
43	93.501	687.726
44	94.237	591.148
45	94.810	459.352
46	95.381	458.310
47	95.933	443.494
48	96.323	312.917

49	96.676	283.284
50	97.028	283.284
51	97.381	282.935
52	97.734	283.284
53	98.012	223.315
54	98.105	74.785
55	98.189	67.638
56	98.274	67.644
57	98.358	67.987
58	98.443	67.638
59	98.527	67.638
60	98.611	67.644
61	98.696	67.987
62	98.780	67.638
63	98.864	67.638
64	98.948	67.644
65	99.033	67.638
66	99.117	67.638
67	99.201	67.638
68	99.285	67.638
69	99.370	67.638
70	99.454	67.638
71	99.538	67.638
72	99.622	67.638
73	99.707	67.638
74	99.791	67.638
75	99.875	67.638
76	99.959	67.638
77	100.000	32.523

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 615.2339

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 170.5114

==========

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	0.0005	0.07	Q	.	.	.	.
0.167	0.0021	0.22	Q	.	.	.	.
0.250	0.0046	0.37	Q	.	.	.	.
0.333	0.0083	0.53	Q	.	.	.	.
0.417	0.0132	0.72	Q	.	.	.	.
0.500	0.0198	0.95	Q	.	.	.	.
0.583	0.0282	1.21	Q	.	.	.	.
0.667	0.0393	1.62	Q	.	.	.	.
0.750	0.0540	2.13	Q	.	.	.	.
0.833	0.0731	2.77	Q	.	.	.	.
0.917	0.0968	3.45	Q	.	.	.	.
1.000	0.1255	4.16	Q	.	.	.	.
1.083	0.1600	5.02	Q	.	.	.	.
1.167	0.1995	5.74	Q	.	.	.	.
1.250	0.2451	6.61	Q	.	.	.	.
1.333	0.2968	7.50	Q	.	.	.	.
1.417	0.3540	8.31	Q	.	.	.	.
1.500	0.4180	9.29	Q	.	.	.	.
1.583	0.4897	10.41	Q	.	.	.	.
1.667	0.5676	11.32	Q	.	.	.	.
1.750	0.6541	12.55	VQ	.	.	.	.
1.833	0.7491	13.79	VQ	.	.	.	.
1.917	0.8533	15.13	VQ	.	.	.	.
2.000	0.9645	16.14	VQ	.	.	.	.
2.083	1.0826	17.15	VQ	.	.	.	.
2.167	1.2094	18.42	VQ	.	.	.	.
2.250	1.3441	19.56	VQ	.	.	.	.
2.333	1.4855	20.53	VQ	.	.	.	.
2.417	1.6335	21.49	VQ	.	.	.	.
2.500	1.7877	22.38	VQ	.	.	.	.
2.583	1.9473	23.18	VQ	.	.	.	.
2.667	2.1116	23.85	VQ	.	.	.	.
2.750	2.2805	24.52	VQ	.	.	.	.
2.833	2.4540	25.19	V Q	.	.	.	.
2.917	2.6318	25.81	V Q	.	.	.	.
3.000	2.8134	26.38	V Q	.	.	.	.
3.083	2.9985	26.87	V Q	.	.	.	.
3.167	3.1866	27.30	V Q	.	.	.	.
3.250	3.3774	27.70	V Q	.	.	.	.
3.333	3.5708	28.08	V Q	.	.	.	.
3.417	3.7668	28.46	V Q	.	.	.	.
3.500	3.9652	28.82	V Q	.	.	.	.
3.583	4.1661	29.17	V Q	.	.	.	.
3.667	4.3692	29.49	.VQ	.	.	.	.
3.750	4.5742	29.76	.VQ	.	.	.	.
3.833	4.7811	30.04	.VQ	.	.	.	.
3.917	4.9898	30.31	.VQ	.	.	.	.

4.000	5.2001	30.53	.VQ	.	.	.	.
4.083	5.4119	30.75	.VQ	.	.	.	.
4.167	5.6252	30.97	.VQ	.	.	.	.
4.250	5.8399	31.19	.VQ	.	.	.	.
4.333	6.0562	31.41	.VQ	.	.	.	.
4.417	6.2739	31.61	.VQ	.	.	.	.
4.500	6.4926	31.75	.VQ	.	.	.	.
4.583	6.7123	31.90	.VQ	.	.	.	.
4.667	6.9330	32.05	.VQ	.	.	.	.
4.750	7.1548	32.20	.VQ	.	.	.	.
4.833	7.3775	32.35	.VQ	.	.	.	.
4.917	7.6014	32.50	.VQ	.	.	.	.
5.000	7.8263	32.65	.VQ	.	.	.	.
5.083	8.0522	32.81	.VQ	.	.	.	.
5.167	8.2792	32.96	.VQ	.	.	.	.
5.250	8.5073	33.12	.VQ	.	.	.	.
5.333	8.7366	33.28	. Q	.	.	.	.
5.417	8.9669	33.44	. Q	.	.	.	.
5.500	9.1983	33.60	. Q	.	.	.	.
5.583	9.4309	33.77	. Q	.	.	.	.
5.667	9.6646	33.93	. Q	.	.	.	.
5.750	9.8994	34.10	. Q	.	.	.	.
5.833	10.1354	34.27	. Q	.	.	.	.
5.917	10.3726	34.44	. Q	.	.	.	.
6.000	10.6110	34.61	. Q	.	.	.	.
6.083	10.8506	34.79	. Q	.	.	.	.
6.167	11.0913	34.96	. Q	.	.	.	.
6.250	11.3334	35.14	. Q	.	.	.	.
6.333	11.5766	35.32	. Q	.	.	.	.
6.417	11.8210	35.49	. Q	.	.	.	.
6.500	12.0665	35.65	. Q	.	.	.	.
6.583	12.3131	35.81	. Q	.	.	.	.
6.667	12.5608	35.97	. Q	.	.	.	.
6.750	12.8097	36.13	. QV	.	.	.	.
6.833	13.0597	36.30	. QV	.	.	.	.
6.917	13.3109	36.47	. QV	.	.	.	.
7.000	13.5632	36.64	. QV	.	.	.	.
7.083	13.8167	36.81	. QV	.	.	.	.
7.167	14.0715	36.99	. QV	.	.	.	.
7.250	14.3274	37.17	. QV	.	.	.	.
7.333	14.5846	37.34	. QV	.	.	.	.
7.417	14.8431	37.53	. Q	.	.	.	.
7.500	15.1028	37.71	. Q	.	.	.	.
7.583	15.3638	37.90	. Q	.	.	.	.
7.667	15.6261	38.09	. Q	.	.	.	.
7.750	15.8897	38.28	. Q	.	.	.	.
7.833	16.1547	38.47	. Q	.	.	.	.
7.917	16.4210	38.67	. Q	.	.	.	.
8.000	16.6887	38.87	. Q	.	.	.	.
8.083	16.9578	39.07	. Q	.	.	.	.
8.167	17.2283	39.28	. QV	.	.	.	.
8.250	17.5002	39.49	. QV	.	.	.	.
8.333	17.7736	39.69	. QV	.	.	.	.
8.417	18.0485	39.91	. QV	.	.	.	.
8.500	18.3248	40.13	. QV	.	.	.	.
8.583	18.6027	40.35	. QV	.	.	.	.
8.667	18.8821	40.57	. QV	.	.	.	.
8.750	19.1631	40.80	. QV	.	.	.	.

8.833	19.4456	41.03	. QV	.	.	.	.
8.917	19.7298	41.26	. QV	.	.	.	.
9.000	20.0156	41.50	. QV	.	.	.	.
9.083	20.3030	41.74	. QV	.	.	.	.
9.167	20.5922	41.98	. QV	.	.	.	.
9.250	20.8830	42.23	. QV	.	.	.	.
9.333	21.1756	42.48	. QV	.	.	.	.
9.417	21.4700	42.74	. Q V	.	.	.	.
9.500	21.7661	43.00	. Q V	.	.	.	.
9.583	22.0641	43.27	. Q V	.	.	.	.
9.667	22.3639	43.53	. Q V	.	.	.	.
9.750	22.6656	43.81	. Q V	.	.	.	.
9.833	22.9693	44.09	. Q V	.	.	.	.
9.917	23.2749	44.37	. Q V	.	.	.	.
10.000	23.5824	44.66	. Q V	.	.	.	.
10.083	23.8920	44.95	. Q V	.	.	.	.
10.167	24.2036	45.25	. Q V	.	.	.	.
10.250	24.5174	45.55	. Q V	.	.	.	.
10.333	24.8332	45.86	. Q V	.	.	.	.
10.417	25.1513	46.18	. Q V	.	.	.	.
10.500	25.4715	46.50	. Q V	.	.	.	.
10.583	25.7940	46.83	. Q V	.	.	.	.
10.667	26.1188	47.16	. Q V	.	.	.	.
10.750	26.4459	47.50	. Q V	.	.	.	.
10.833	26.7754	47.84	. Q V	.	.	.	.
10.917	27.1073	48.20	. Q V	.	.	.	.
11.000	27.4417	48.55	. Q V	.	.	.	.
11.083	27.7786	48.92	. Q V	.	.	.	.
11.167	28.1181	49.30	. Q V	.	.	.	.
11.250	28.4603	49.68	. Q V	.	.	.	.
11.333	28.8051	50.07	. Q V	.	.	.	.
11.417	29.1527	50.47	. Q V	.	.	.	.
11.500	29.5031	50.87	. Q V	.	.	.	.
11.583	29.8563	51.29	. Q V	.	.	.	.
11.667	30.2125	51.71	. Q V	.	.	.	.
11.750	30.5716	52.15	. Q V	.	.	.	.
11.833	30.9339	52.59	. Q V	.	.	.	.
11.917	31.2992	53.05	. Q V	.	.	.	.
12.000	31.6678	53.52	. Q V	.	.	.	.
12.083	32.0400	54.04	. Q V	.	.	.	.
12.167	32.4161	54.62	. Q V	.	.	.	.
12.250	32.7964	55.21	. Q V	.	.	.	.
12.333	33.1807	55.81	. Q V	.	.	.	.
12.417	33.5695	56.46	. Q V	.	.	.	.
12.500	33.9630	57.13	. Q V	.	.	.	.
12.583	34.3613	57.84	. Q V	.	.	.	.
12.667	34.7652	58.65	. Q V	.	.	.	.
12.750	35.1753	59.54	. Q V	.	.	.	.
12.833	35.5921	60.52	. Q V	.	.	.	.
12.917	36.0159	61.54	. Q V	.	.	.	.
13.000	36.4470	62.59	. Q V	.	.	.	.
13.083	36.8861	63.76	. Q V	.	.	.	.
13.167	37.3328	64.86	. Q V	.	.	.	.
13.250	37.7878	66.08	. Q V	.	.	.	.
13.333	38.2514	67.31	. Q V	.	.	.	.
13.417	38.7235	68.54	. Q V.	.	.	.	.
13.500	39.2047	69.87	. Q V.	.	.	.	.
13.583	39.6959	71.33	. Q V.	.	.	.	.

13.667	40.1965	72.68	. Q V. . . .
13.750	40.7079	74.26	. Q V. . . .
13.833	41.2303	75.86	. Q V. . . .
13.917	41.7645	77.56	. Q V. . . .
14.000	42.3092	79.09	. Q V. . . .
14.083	42.8657	80.80	. Q V . . .
14.167	43.4362	82.84	. Q V . . .
14.250	44.0205	84.85	. Q V . . .
14.333	44.6182	86.79	. Q V . . .
14.417	45.2302	88.86	. Q V . . .
14.500	45.8569	90.99	. Q V . . .
14.583	46.4986	93.18	. Q V . . .
14.667	47.1570	95.59	. Q .V . . .
14.750	47.8338	98.28	. Q .V . . .
14.833	48.5312	101.26	. Q .V . . .
14.917	49.2497	104.33	. Q .V . . .
15.000	49.9900	107.49	. Q .V . . .
15.083	50.7542	110.96	. Q .V . . .
15.167	51.5406	114.18	. Q. V . . .
15.250	52.3518	117.79	. Q. V . . .
15.333	53.1884	121.47	. Q. V . . .
15.417	54.0482	124.85	. Q. V . . .
15.500	54.9322	128.36	. Q V . . .
15.583	55.8434	132.31	. Q V . . .
15.667	56.7800	135.98	. Q V . . .
15.750	57.7466	140.35	. .Q V . . .
15.833	58.7445	144.91	. .Q V . . .
15.917	59.7780	150.06	. . Q V . . .
16.000	60.8440	154.78	. . Q V . . .
16.083	62.0159	170.16	. . QV . . .
16.167	63.2920	185.30	. . Q . . .
16.250	64.5963	189.39	. . Q . . .
16.333	65.9285	193.43	. . Q . . .
16.417	67.3348	204.20	. . VQ . . .
16.500	68.8084	213.97	. . VQ . . .
16.583	70.3489	223.67	. . VQ . . .
16.667	72.0688	249.74	. . V Q. . .
16.750	73.9317	270.49	. . V .Q . .
16.833	75.9528	293.46	. . V . Q . .
16.917	78.0237	300.70	. . V . Q . .
17.000	80.1548	309.44	. . V . Q . .
17.083	82.4343	330.98	. . V. Q . .
17.167	84.5909	313.15	. . V. Q . .
17.250	86.9037	335.82	. . V Q . .
17.333	89.2409	339.35	. . V Q . .
17.417	91.5154	330.26	. . .V Q . .
17.500	93.9580	354.66	. . . V Q . .
17.583	96.5490	376.22	. . . V Q .
17.667	98.9458	348.01	. . . V Q . .
17.750	101.6506	392.73	. . . V .Q .
17.833	104.3542	392.56	. . . V .Q .
17.917	107.1305	403.13	. . . V . Q .
18.000	109.5532	351.77	. . . V Q . .
18.083	111.9594	349.39	. . . VQ . .
18.167	114.5972	383.01	. . . V Q .
18.250	117.0792	360.38	. . . VQ . .
18.333	119.3491	329.59	. . . QV . .
18.417	121.5625	321.39	. . . Q V . .

18.500	123.6706	306.10	. . . Q V. .
18.583	125.6426	286.33	. . . Q V. .
18.667	127.4388	260.82	. . Q V. .
18.750	129.2070	256.74	. . Q V .
18.833	130.9275	249.81	. . Q. V .
18.917	132.5462	235.04	. . Q . .V .
19.000	134.0642	220.41	. . Q . .V .
19.083	135.4687	203.93	. . Q . .V .
19.167	136.7623	187.83	. . Q . . V .
19.250	137.9891	178.14	. . Q . . V .
19.333	139.1589	169.85	. . Q . . V .
19.417	140.2880	163.95	. . Q . . V .
19.500	141.3653	156.43	. . Q . . V .
19.583	142.4008	150.35	. . Q . . V .
19.667	143.3695	140.65	. .Q . . V .
19.750	144.2602	129.33	. . Q . . V .
19.833	145.1217	125.09	. . Q . . V .
19.917	145.9498	120.23	. . Q. . . V .
20.000	146.7062	109.83	. . Q . . . V .
20.083	147.4287	104.91	. . Q . . . V .
20.167	148.1291	101.70	. . Q . . . V .
20.250	148.8085	98.65	. . Q . . . V .
20.333	149.4658	95.44	. . Q . . . V .
20.417	150.0788	89.00	. . Q . . . V .
20.500	150.6185	78.37	. . Q . . . V .
20.583	151.1382	75.47	. . Q . . . V .
20.667	151.6437	73.40	. Q . . . V .
20.750	152.1362	71.51	. Q . . . V .
20.833	152.6149	69.51	. Q . . . V .
20.917	153.0807	67.64	. Q . . . V .
21.000	153.5352	65.98	. Q . . . V .
21.083	153.9791	64.46	. Q . . . V .
21.167	154.4129	63.00	. Q . . . V .
21.250	154.8373	61.62	. Q . . . V .
21.333	155.2526	60.30	. Q . . . V .
21.417	155.6594	59.07	. Q . . . V .
21.500	156.0587	57.98	. Q . . . V .
21.583	156.4508	56.93	. Q . . . V .
21.667	156.8361	55.94	. Q . . . V .
21.750	157.2151	55.04	. Q . . . V .
21.833	157.5884	54.21	. Q . . . V .
21.917	157.9561	53.39	. Q . . . V .
22.000	158.3185	52.61	. Q . . . V .
22.083	158.6754	51.83	. Q . . . V .
22.167	159.0270	51.05	. Q . . . V .
22.250	159.3729	50.22	. Q . . . V .
22.333	159.7125	49.31	. Q . . . V .
22.417	160.0334	46.60	. Q . . . V .
22.500	160.3376	44.16	. Q . . . V .
22.583	160.6372	43.51	. Q . . . V .
22.667	160.9329	42.93	. Q . . . V .
22.750	161.2246	42.35	. Q . . . V .
22.833	161.5121	41.76	. Q . . . V .
22.917	161.7958	41.19	. Q . . . V .
23.000	162.0757	40.64	. Q . . . V .
23.083	162.3519	40.11	. Q . . . V .
23.167	162.6246	39.59	. Q . . . V .
23.250	162.8938	39.10	. Q . . . V .

23.333	163.1598	38.61	. Q	.	.	.	V	.
23.417	163.4226	38.17	. Q	.	.	.	V	.
23.500	163.6826	37.75	. Q	.	.	.	V	.
23.583	163.9399	37.36	. Q	.	.	.	V	.
23.667	164.1945	36.97	. Q	.	.	.	V	.
23.750	164.4465	36.59	. Q	.	.	.	V	.
23.833	164.6960	36.23	. Q	.	.	.	V	.
23.917	164.9430	35.87	. Q	.	.	.	V	.
24.000	165.1877	35.52	. Q	.	.	.	V	.
24.083	165.4295	35.11	. Q	.	.	.	V	.
24.167	165.6680	34.63	. Q	.	.	.	V	.
24.250	165.9032	34.16	. Q	.	.	.	V	.
24.333	166.1353	33.70	. Q	.	.	.	V	.
24.417	166.3640	33.21	. Q	.	.	.	V	.
24.500	166.5892	32.70	. Q	.	.	.	V	.
24.583	166.8108	32.17	. Q	.	.	.	V	.
24.667	167.0277	31.50	. Q	.	.	.	V	.
24.750	167.2395	30.74	. Q	.	.	.	V	.
24.833	167.4451	29.86	. Q	.	.	.	V	.
24.917	167.6445	28.96	. Q	.	.	.	V	.
25.000	167.8376	28.03	. Q	.	.	.	V	.
25.083	168.0233	26.97	. Q	.	.	.	V	.
25.167	168.2027	26.05	. Q	.	.	.	V	.
25.250	168.3749	25.00	.Q	.	.	.	V	.
25.333	168.5397	23.94	.Q	.	.	.	V	.
25.417	168.6980	22.97	.Q	.	.	.	V	.
25.500	168.8485	21.86	.Q	.	.	.	V	.
25.583	168.9904	20.60	.Q	.	.	.	V	.
25.667	169.1252	19.57	.Q	.	.	.	V	.
25.750	169.2508	18.24	.Q	.	.	.	V	.
25.833	169.3672	16.91	.Q	.	.	.	V	.
25.917	169.4739	15.49	.Q	.	.	.	V	.
26.000	169.5732	14.42	.Q	.	.	.	V	.
26.083	169.6652	13.36	.Q	.	.	.	V	.
26.167	169.7483	12.06	Q	.	.	.	V	.
26.250	169.8233	10.89	Q	.	.	.	V	.
26.333	169.8915	9.91	Q	.	.	.	V	.
26.417	169.9531	8.95	Q	.	.	.	V	.
26.500	170.0087	8.06	Q	.	.	.	V	.
26.583	170.0588	7.28	Q	.	.	.	V	.
26.667	170.1046	6.65	Q	.	.	.	V	.
26.750	170.1459	6.00	Q	.	.	.	V	.
26.833	170.1829	5.38	Q	.	.	.	V	.
26.917	170.2160	4.81	Q	.	.	.	V	.
27.000	170.2456	4.30	Q	.	.	.	V	.
27.083	170.2722	3.86	Q	.	.	.	V	.
27.167	170.2963	3.50	Q	.	.	.	V	.
27.250	170.3182	3.17	Q	.	.	.	V	.
27.333	170.3379	2.87	Q	.	.	.	V	.
27.417	170.3556	2.57	Q	.	.	.	V	.
27.500	170.3714	2.30	Q	.	.	.	V	.
27.583	170.3854	2.03	Q	.	.	.	V	.
27.667	170.3979	1.80	Q	.	.	.	V	.
27.750	170.4090	1.62	Q	.	.	.	V	.
27.833	170.4190	1.45	Q	.	.	.	V	.
27.917	170.4278	1.28	Q	.	.	.	V	.
28.000	170.4357	1.15	Q	.	.	.	V	.
28.083	170.4429	1.04	Q	.	.	.	V	.

28.167	170.4494	0.93	Q	.	.	.	V	.
28.250	170.4550	0.82	Q	.	.	.	V	.
28.333	170.4600	0.72	Q	.	.	.	V	.
28.417	170.4643	0.63	Q	.	.	.	V	.
28.500	170.4684	0.60	Q	.	.	.	V	.
28.583	170.4723	0.57	Q	.	.	.	V	.
28.667	170.4761	0.54	Q	.	.	.	V	.
28.750	170.4796	0.51	Q	.	.	.	V	.
28.833	170.4829	0.48	Q	.	.	.	V	.
28.917	170.4861	0.46	Q	.	.	.	V	.
29.000	170.4890	0.43	Q	.	.	.	V	.
29.083	170.4918	0.40	Q	.	.	.	V	.
29.167	170.4943	0.37	Q	.	.	.	V	.
29.250	170.4967	0.35	Q	.	.	.	V	.
29.333	170.4989	0.32	Q	.	.	.	V	.
29.417	170.5009	0.29	Q	.	.	.	V	.
29.500	170.5028	0.27	Q	.	.	.	V	.
29.583	170.5044	0.24	Q	.	.	.	V	.
29.667	170.5059	0.21	Q	.	.	.	V	.
29.750	170.5072	0.19	Q	.	.	.	V	.
29.833	170.5083	0.16	Q	.	.	.	V	.
29.917	170.5092	0.14	Q	.	.	.	V	.
30.000	170.5100	0.11	Q	.	.	.	V	.
30.083	170.5106	0.09	Q	.	.	.	V	.
30.167	170.5110	0.06	Q	.	.	.	V	.
30.250	170.5113	0.04	Q	.	.	.	V	.
30.333	170.5114	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%	1820.0
10%	870.0
20%	385.0
30%	275.0
40%	205.0
50%	165.0
60%	135.0
70%	110.0
80%	75.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

```
____________________________________________________________________________
****************************************************************************

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                          Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U                                 *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
* 2-YR EV DEC 2022 ROKAMOTO                                                *
 **************************************************************************

  FILE NAME: EV0233US.DAT
  TIME/DATE OF STUDY: 16:41 12/12/2022


                         ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  13010.00 TO NODE    133.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   54354.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    5.932 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.585; LOW LOSS FRACTION = 0.923
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.15; 30-MINUTE =  0.29;  1-HOUR =  0.41
    3-HOUR =  0.76;    6-HOUR =  1.12; 24-HOUR =  1.97
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940
============================================================================
```



```
 +--------------------------------------------------------------------------------
--------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0233US.DAT   ]
Page:   1 of    |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |UPSTREAM  DOWNSTREAM|                               | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 | 13010.00     133.00| Subarea (UH) Added to Stream #1|       0.0       587.9|
20.833 |            |           |
 +--------------------+-------------------------------+----------------------+-
-----------+------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                              |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                      |
 +--------------------------------------------------------------------------------
--------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 2-YR EV DEC  2022 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV0234CS.DAT
  TIME/DATE OF STUDY: 16:42 12/12/2022


                        ** INPUT SUMMARY **


*****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
=============================================================================
  WATERSHED AREA =   66557.602 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    6.120 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.569; LOW LOSS FRACTION = 0.905
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.15; 30-MINUTE =  0.29;  1-HOUR =  0.40
    3-HOUR =  0.74;    6-HOUR =  1.07; 24-HOUR =  1.88
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.294; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.741;    6-HOUR = 0.887; 24-HOUR = 0.933
=============================================================================
```



```
 +-----------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0234CS.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0       825.3|
21.000 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-----------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - SINGLE AREA UH                                 *
* PHASE CONDITION NO PA4&5 - REGIONAL NODE 134T                         *
* 2-YR EV JANUARY 2019 ROKAMOTO                                         *
 ************************************************************************

  FILE NAME: EV0234TS.DAT
  TIME/DATE OF STUDY: 06:41 01/03/2019


******************************************************************************
  FLOW PROCESS FROM NODE  13500.00 TO NODE    134.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3859.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.991 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.567
         LOW LOSS FRACTION = 0.908
         *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 = 0.828
          30-MINUTE FACTOR = 0.828
           1-HOUR FACTOR = 0.828
           3-HOUR FACTOR = 0.974
           6-HOUR FACTOR = 0.987
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.786
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.159	74.315
2	0.478	148.631
3	0.796	148.631
4	1.114	148.631
5	1.433	148.631
6	1.751	148.631
7	2.113	168.669
8	2.591	223.114
9	3.075	226.177
10	3.560	226.178
11	4.115	259.392
12	4.973	400.300
13	5.882	424.128
14	6.995	519.660
15	8.233	577.793
16	9.695	682.399
17	11.111	660.965
18	12.504	650.261
19	13.973	685.640
20	15.960	927.671
21	17.528	732.149
22	19.014	693.602
23	20.630	754.313
24	22.590	914.753
25	24.571	924.816
26	26.169	745.954
27	27.801	761.383
28	29.857	959.865
29	31.836	923.634
30	34.320	1159.797
31	36.367	955.180
32	38.042	782.040
33	40.766	1271.399
34	43.255	1161.864
35	45.768	1173.069
36	48.677	1358.134
37	51.232	1192.376
38	53.257	945.119
39	55.178	896.873
40	57.245	964.794
41	59.678	1135.745
42	62.495	1315.064
43	64.719	1038.070
44	66.617	885.954
45	68.567	910.086
46	70.588	943.583
47	72.257	778.910
48	74.045	834.661

49	75.739	790.487
50	77.073	622.620
51	78.311	578.079
52	79.550	578.282
53	80.834	599.390
54	82.119	599.878
55	83.303	552.598
56	84.430	526.170
57	85.492	495.579
58	86.447	445.839
59	87.304	400.112
60	88.114	377.858
61	88.779	310.535
62	89.435	306.034
63	90.076	299.488
64	90.667	275.931
65	91.254	273.723
66	91.839	273.064
67	92.386	255.560
68	92.917	247.708
69	93.447	247.708
70	93.960	239.036
71	94.339	177.191
72	94.693	165.246
73	95.047	165.083
74	95.401	165.086
75	95.755	165.246
76	96.064	144.630
77	96.285	103.077
78	96.504	102.091
79	96.722	101.931
80	96.941	102.094
81	97.159	101.927
82	97.378	101.931
83	97.596	102.094
84	97.815	102.091
85	97.998	85.243
86	98.060	29.124
87	98.112	24.377
88	98.165	24.377
89	98.217	24.380
90	98.269	24.541
91	98.321	24.049
92	98.374	24.544
93	98.426	24.541
94	98.478	24.213
95	98.530	24.377
96	98.583	24.544
97	98.635	24.377
98	98.687	24.213
99	98.739	24.544
100	98.791	24.213
101	98.844	24.541
102	98.896	24.217
103	98.948	24.541
104	99.000	24.213
105	99.052	24.213
106	99.104	24.213

107	99.156	24.213
108	99.208	24.213
109	99.260	24.213
110	99.311	24.213
111	99.363	24.213
112	99.415	24.213
113	99.467	24.213
114	99.519	24.213
115	99.571	24.213
116	99.623	24.213
117	99.675	24.213
118	99.726	24.213
119	99.778	24.213
120	99.830	24.213
121	99.882	24.213
122	99.934	24.213
123	99.986	24.213
124	100.000	6.628

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 401.0649

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 58.4775

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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	0.0001	0.01	Q . . . .
0.167	0.0004	0.04	Q . . . .
0.250	0.0008	0.07	Q . . . .
0.333	0.0014	0.09	Q . . . .
0.417	0.0023	0.12	Q . . . .
0.500	0.0032	0.14	Q . . . .
0.583	0.0044	0.17	Q . . . .
0.667	0.0059	0.21	Q . . . .
0.750	0.0077	0.25	Q . . . .
0.833	0.0097	0.30	Q . . . .
0.917	0.0121	0.34	Q . . . .
1.000	0.0149	0.41	Q . . . .
1.083	0.0183	0.49	Q . . . .
1.167	0.0223	0.58	Q . . . .
1.250	0.0270	0.68	Q . . . .
1.333	0.0325	0.81	Q . . . .
1.417	0.0389	0.93	Q . . . .
1.500	0.0461	1.04	Q . . . .
1.583	0.0541	1.17	Q . . . .
1.667	0.0633	1.33	Q . . . .
1.750	0.0734	1.47	Q . . . .
1.833	0.0844	1.59	Q . . . .
1.917	0.0963	1.73	Q . . . .
2.000	0.1093	1.90	Q . . . .
2.083	0.1235	2.06	Q . . . .
2.167	0.1387	2.20	Q . . . .
2.250	0.1548	2.34	Q . . . .
2.333	0.1722	2.52	Q . . . .
2.417	0.1907	2.69	Q . . . .
2.500	0.2107	2.90	Q . . . .
2.583	0.2319	3.08	Q . . . .
2.667	0.2542	3.23	Q . . . .
2.750	0.2780	3.46	Q . . . .
2.833	0.3033	3.68	Q . . . .
2.917	0.3301	3.90	Q . . . .
3.000	0.3587	4.15	Q . . . .
3.083	0.3888	4.37	Q . . . .
3.167	0.4202	4.55	Q . . . .
3.250	0.4527	4.72	Q . . . .
3.333	0.4865	4.91	Q . . . .
3.417	0.5218	5.13	VQ . . . .
3.500	0.5588	5.38	VQ . . . .
3.583	0.5972	5.58	VQ . . . .
3.667	0.6368	5.75	VQ . . . .
3.750	0.6777	5.93	VQ . . . .
3.833	0.7198	6.12	VQ . . . .
3.917	0.7630	6.28	VQ . . . .

4.000	0.8074	6.44	VQ . . . .
4.083	0.8529	6.61	VQ . . . .
4.167	0.8993	6.74	VQ . . . .
4.250	0.9466	6.86	VQ . . . .
4.333	0.9947	6.99	VQ . . . .
4.417	1.0438	7.12	VQ . . . .
4.500	1.0937	7.25	VQ . . . .
4.583	1.1445	7.38	VQ . . . .
4.667	1.1962	7.50	VQ . . . .
4.750	1.2486	7.61	VQ . . . .
4.833	1.3017	7.72	VQ . . . .
4.917	1.3555	7.82	VQ . . . .
5.000	1.4100	7.91	VQ . . . .
5.083	1.4651	8.00	.Q . . . .
5.167	1.5207	8.08	.Q . . . .
5.250	1.5770	8.16	.Q . . . .
5.333	1.6337	8.24	.Q . . . .
5.417	1.6910	8.32	.Q . . . .
5.500	1.7489	8.40	.Q . . . .
5.583	1.8073	8.48	.Q . . . .
5.667	1.8662	8.56	.Q . . . .
5.750	1.9257	8.63	.Q . . . .
5.833	1.9857	8.71	.Q . . . .
5.917	2.0461	8.78	.Q . . . .
6.000	2.1070	8.84	.Q . . . .
6.083	2.1683	8.90	.Q . . . .
6.167	2.2301	8.97	.Q . . . .
6.250	2.2923	9.03	.Q . . . .
6.333	2.3550	9.10	.Q . . . .
6.417	2.4180	9.15	.Q . . . .
6.500	2.4814	9.21	.Q . . . .
6.583	2.5452	9.26	.Q . . . .
6.667	2.6094	9.32	.Q . . . .
6.750	2.6740	9.38	.Q . . . .
6.833	2.7390	9.44	.Q . . . .
6.917	2.8044	9.50	.Q . . . .
7.000	2.8702	9.55	.Q . . . .
7.083	2.9364	9.61	.QV . . . .
7.167	3.0029	9.66	.QV . . . .
7.250	3.0697	9.70	.QV . . . .
7.333	3.1369	9.75	.QV . . . .
7.417	3.2044	9.80	.QV . . . .
7.500	3.2722	9.85	.QV . . . .
7.583	3.3404	9.90	.QV . . . .
7.667	3.4089	9.95	.QV . . . .
7.750	3.4777	10.00	.QV . . . .
7.833	3.5469	10.05	. Q . . . .
7.917	3.6165	10.10	. Q . . . .
8.000	3.6864	10.15	. Q . . . .
8.083	3.7566	10.20	. Q . . . .
8.167	3.8273	10.26	. Q . . . .
8.250	3.8983	10.31	. Q . . . .
8.333	3.9697	10.36	. Q . . . .
8.417	4.0414	10.42	. Q . . . .
8.500	4.1136	10.48	. Q . . . .
8.583	4.1861	10.53	. Q . . . .
8.667	4.2590	10.59	. Q . . . .
8.750	4.3324	10.65	. Q . . . .

8.833	4.4061	10.71	. QV	.	.	.	.
8.917	4.4802	10.76	. QV	.	.	.	.
9.000	4.5548	10.83	. QV	.	.	.	.
9.083	4.6298	10.89	. QV	.	.	.	.
9.167	4.7052	10.95	. QV	.	.	.	.
9.250	4.7810	11.01	. QV	.	.	.	.
9.333	4.8573	11.07	. QV	.	.	.	.
9.417	4.9340	11.14	. QV	.	.	.	.
9.500	5.0111	11.20	. QV	.	.	.	.
9.583	5.0887	11.27	. QV	.	.	.	.
9.667	5.1668	11.34	. QV	.	.	.	.
9.750	5.2454	11.40	. QV	.	.	.	.
9.833	5.3244	11.47	. QV	.	.	.	.
9.917	5.4039	11.54	. QV	.	.	.	.
10.000	5.4839	11.62	. QV	.	.	.	.
10.083	5.5644	11.69	. QV	.	.	.	.
10.167	5.6454	11.76	. QV	.	.	.	.
10.250	5.7269	11.83	. QV	.	.	.	.
10.333	5.8089	11.91	. QV	.	.	.	.
10.417	5.8914	11.98	. Q V	.	.	.	.
10.500	5.9744	12.05	. Q V	.	.	.	.
10.583	6.0579	12.13	. Q V	.	.	.	.
10.667	6.1420	12.21	. Q V	.	.	.	.
10.750	6.2266	12.28	. Q V	.	.	.	.
10.833	6.3117	12.36	. Q V	.	.	.	.
10.917	6.3974	12.44	. Q V	.	.	.	.
11.000	6.4837	12.52	. Q V	.	.	.	.
11.083	6.5705	12.61	. Q V	.	.	.	.
11.167	6.6579	12.69	. Q V	.	.	.	.
11.250	6.7459	12.78	. Q V	.	.	.	.
11.333	6.8345	12.87	. Q V	.	.	.	.
11.417	6.9237	12.95	. Q V	.	.	.	.
11.500	7.0135	13.05	. Q V	.	.	.	.
11.583	7.1040	13.14	. Q V	.	.	.	.
11.667	7.1952	13.23	. Q V	.	.	.	.
11.750	7.2870	13.33	. Q V	.	.	.	.
11.833	7.3795	13.43	. Q V	.	.	.	.
11.917	7.4726	13.53	. Q V	.	.	.	.
12.000	7.5665	13.63	. Q V	.	.	.	.
12.083	7.6612	13.74	. Q V	.	.	.	.
12.167	7.7567	13.87	. Q V	.	.	.	.
12.250	7.8530	13.99	. Q V	.	.	.	.
12.333	7.9502	14.12	. Q V	.	.	.	.
12.417	8.0483	14.24	. Q V	.	.	.	.
12.500	8.1474	14.38	. Q V	.	.	.	.
12.583	8.2473	14.51	. Q V	.	.	.	.
12.667	8.3483	14.66	. Q V	.	.	.	.
12.750	8.4502	14.80	. Q V	.	.	.	.
12.833	8.5532	14.96	. Q V	.	.	.	.
12.917	8.6573	15.11	. Q V	.	.	.	.
13.000	8.7626	15.29	. Q V	.	.	.	.
13.083	8.8691	15.47	. Q V	.	.	.	.
13.167	8.9770	15.66	. Q V	.	.	.	.
13.250	9.0862	15.86	. Q V	.	.	.	.
13.333	9.1970	16.08	. Q V	.	.	.	.
13.417	9.3092	16.30	. Q V	.	.	.	.
13.500	9.4230	16.52	. Q V	.	.	.	.
13.583	9.5384	16.75	. Q V	.	.	.	.

13.667	9.6555	17.01	. Q V	.	.	.	.
13.750	9.7744	17.26	. Q V	.	.	.	.
13.833	9.8949	17.50	. Q V	.	.	.	.
13.917	10.0173	17.76	. Q V	.	.	.	.
14.000	10.1415	18.04	. Q V	.	.	.	.
14.083	10.2679	18.35	. Q V	.	.	.	.
14.167	10.3964	18.66	. Q V	.	.	.	.
14.250	10.5271	18.98	. Q V	.	.	.	.
14.333	10.6602	19.32	. Q V	.	.	.	.
14.417	10.7957	19.67	. Q V	.	.	.	.
14.500	10.9338	20.05	. Q V	.	.	.	.
14.583	11.0745	20.43	. Q V	.	.	.	.
14.667	11.2178	20.81	. Q V	.	.	.	.
14.750	11.3641	21.25	. Q V	.	.	.	.
14.833	11.5135	21.69	. Q V	.	.	.	.
14.917	11.6660	22.14	. Q V	.	.	.	.
15.000	11.8221	22.67	. Q V	.	.	.	.
15.083	11.9818	23.19	. Q V	.	.	.	.
15.167	12.1452	23.73	. Q V	.	.	.	.
15.250	12.3125	24.29	. Q V	.	.	.	.
15.333	12.4840	24.90	. Q V	.	.	.	.
15.417	12.6596	25.50	. Q V	.	.	.	.
15.500	12.8394	26.10	. Q V	.	.	.	.
15.583	13.0234	26.71	. Q V	.	.	.	.
15.667	13.2121	27.40	. Q V.	.	.	.	.
15.750	13.4055	28.08	. Q V.	.	.	.	.
15.833	13.6040	28.83	. Q V.	.	.	.	.
15.917	13.8081	29.64	. Q V.	.	.	.	.
16.000	14.0189	30.61	. Q V.	.	.	.	.
16.083	14.2662	35.90	. Q V.	.	.	.	.
16.167	14.5490	41.06	. QV.	.	.	.	.
16.250	14.8373	41.86	. Q V	.	.	.	.
16.333	15.1307	42.61	. Q V	.	.	.	.
16.417	15.4295	43.39	. Q V	.	.	.	.
16.500	15.7347	44.30	. Q V	.	.	.	.
16.583	16.0539	46.35	. QV	.	.	.	.
16.667	16.4005	50.33	. QV	.	.	.	.
16.750	16.7550	51.47	. QV	.	.	.	.
16.833	17.1170	52.57	. QV	.	.	.	.
16.917	17.5007	55.71	. .Q	.	.	.	.
17.000	17.9484	65.01	. . VQ	.	.	.	.
17.083	18.4140	67.61	. . VQ	.	.	.	.
17.167	18.9253	74.24	. . V Q	.	.	.	.
17.250	19.4666	78.60	. . V Q	.	.	.	.
17.333	20.0553	85.47	. . V Q	.	.	.	.
17.417	20.6406	84.99	. . V Q	.	.	.	.
17.500	21.2285	85.37	. . V Q	.	.	.	.
17.583	21.8372	88.38	. . V Q	.	.	.	.
17.667	22.5455	102.84	. . V Q	.	.	.	.
17.750	23.1795	92.06	. . V Q .	.	.	.	.
17.833	23.8013	90.29	. . V Q .	.	.	.	.
17.917	24.4519	94.47	. . V Q .	.	.	.	.
18.000	25.1710	104.41	. . V Q	.	.	.	.
18.083	25.8944	105.03	. . V .Q	.	.	.	.
18.167	26.5481	94.92	. . Q .	.	.	.	.
18.250	27.2105	96.18	. . VQ.	.	.	.	.
18.333	27.9538	107.94	. . V.Q	.	.	.	.
18.417	28.6862	106.33	. . V.Q	.	.	.	.

18.500	29.5120	119.91	. . V Q . .
18.583	30.2571	108.20	. . VQ . .
18.667	30.9371	98.73	. . Q.V . .
18.750	31.8120	127.04	. . .V Q . .
18.833	32.6437	120.77	. . . V Q . .
18.917	33.4783	121.19	. . . V Q . .
19.000	34.3810	131.06	. . . V Q . .
19.083	35.2119	120.65	. . . Q . .
19.167	35.9394	105.63	. . .Q V . .
19.250	36.6452	102.48	. . Q V . .
19.333	37.3775	106.34	. . .Q V . .
19.417	38.1757	115.90	. . . Q V . .
19.500	39.0382	125.23	. . . QV . .
19.583	39.7824	108.05	. . .Q V . .
19.667	40.4588	98.23	. . Q. V . .
19.750	41.1380	98.62	. . Q. V . .
19.833	41.8237	99.56	. . Q. V . .
19.917	42.4369	89.04	. . Q . V. .
20.000	43.0634	90.96	. . Q . V. .
20.083	43.6633	87.11	. . Q . V. .
20.167	44.1890	76.34	. . Q . V .
20.250	44.6902	72.78	. . Q . V .
20.333	45.1858	71.95	. . Q . V .
20.417	45.6837	72.30	. . Q . .V .
20.500	46.1743	71.24	. . Q . .V .
20.583	46.6389	67.46	. . Q . .V .
20.667	47.0860	64.92	. . Q . . V .
20.750	47.5135	62.07	. . Q . . V .
20.833	47.9139	58.13	. .Q . . V .
20.917	48.2891	54.49	. Q . . V .
21.000	48.6484	52.18	. Q . . V .
21.083	48.9748	47.38	. Q. . . V .
21.167	49.2936	46.30	. Q. . . V .
21.250	49.6048	45.18	. Q. . . V .
21.333	49.9016	43.11	. Q . . . V .
21.417	50.1925	42.24	. Q . . . V .
21.500	50.4780	41.44	. Q . . . V .
21.583	50.7515	39.72	. Q . . . V .
21.667	51.0173	38.59	. Q . . . V .
21.750	51.2784	37.91	. Q . . . V .
21.833	51.5310	36.69	. Q . . . V .
21.917	51.7547	32.48	. Q . . . V .
22.000	51.9695	31.19	. Q . . . V .
22.083	52.1806	30.65	. Q . . . V .
22.167	52.3882	30.14	. Q . . . V .
22.250	52.5919	29.59	. Q . . . V .
22.333	52.7835	27.82	. Q . . . V .
22.417	52.9551	24.92	. Q . . . V .
22.500	53.1233	24.42	. Q . . . V .
22.583	53.2888	24.03	. Q . . . V .
22.667	53.4518	23.66	. Q . . . V .
22.750	53.6120	23.27	. Q . . . V .
22.833	53.7696	22.88	. Q . . . V .
22.917	53.9246	22.51	. Q . . . V .
23.000	54.0766	22.08	. Q . . . V .
23.083	54.2189	20.66	. Q . . . V .
23.167	54.3362	17.03	. Q . . . V .
23.250	54.4493	16.42	. Q . . . V .

23.333	54.5605	16.15	. Q . . . V .
23.417	54.6700	15.90	. Q . . . V .
23.500	54.7778	15.65	. Q . . . V .
23.583	54.8837	15.38	. Q . . . V .
23.667	54.9883	15.18	. Q . . . V .
23.750	55.0913	14.96	. Q . . . V .
23.833	55.1927	14.73	. Q . . . V .
23.917	55.2928	14.54	. Q . . . V .
24.000	55.3917	14.36	. Q . . . V .
24.083	55.4892	14.15	. Q . . . V .
24.167	55.5853	13.95	. Q . . . V .
24.250	55.6802	13.79	. Q . . . V .
24.333	55.7738	13.59	. Q . . . V .
24.417	55.8664	13.44	. Q . . . V .
24.500	55.9576	13.25	. Q . . . V .
24.583	56.0478	13.10	. Q . . . V .
24.667	56.1367	12.90	. Q . . . V .
24.750	56.2244	12.73	. Q . . . V .
24.833	56.3109	12.56	. Q . . . V .
24.917	56.3962	12.39	. Q . . . V .
25.000	56.4802	12.19	. Q . . . V .
25.083	56.5628	12.00	. Q . . . V .
25.167	56.6441	11.80	. Q . . . V .
25.250	56.7238	11.58	. Q . . . V .
25.333	56.8021	11.36	. Q . . . V .
25.417	56.8787	11.14	. Q . . . V .
25.500	56.9539	10.92	. Q . . . V .
25.583	57.0276	10.69	. Q . . . V.
25.667	57.0995	10.44	. Q . . . V.
25.750	57.1699	10.22	. Q . . . V.
25.833	57.2388	10.01	. Q . . . V.
25.917	57.3062	9.79	.Q . . . V.
26.000	57.3719	9.54	.Q . . . V.
26.083	57.4358	9.28	.Q . . . V.
26.167	57.4980	9.04	.Q . . . V.
26.250	57.5585	8.78	.Q . . . V.
26.333	57.6100	7.48	.Q . . . V.
26.417	57.6571	6.83	.Q . . . V.
26.500	57.7022	6.55	.Q . . . V.
26.583	57.7456	6.31	.Q . . . V.
26.667	57.7877	6.10	.Q . . . V.
26.750	57.8277	5.81	.Q . . . V.
26.833	57.8658	5.54	.Q . . . V.
26.917	57.9021	5.27	.Q . . . V.
27.000	57.9364	4.98	Q . . . V.
27.083	57.9689	4.71	Q . . . V.
27.167	57.9999	4.50	Q . . . V.
27.250	58.0294	4.29	Q . . . V.
27.333	58.0575	4.08	Q . . . V.
27.417	58.0839	3.84	Q . . . V.
27.500	58.1085	3.57	Q . . . V.
27.583	58.1316	3.36	Q . . . V.
27.667	58.1535	3.17	Q . . . V.
27.750	58.1740	2.98	Q . . . V.
27.833	58.1932	2.79	Q . . . V.
27.917	58.2112	2.62	Q . . . V.
28.000	58.2281	2.45	Q . . . V.
28.083	58.2439	2.29	Q . . . V.

28.167	58.2588	2.16	Q	.	.	.	V.
28.250	58.2728	2.04	Q	.	.	.	V.
28.333	58.2860	1.92	Q	.	.	.	V.
28.417	58.2984	1.80	Q	.	.	.	V.
28.500	58.3099	1.68	Q	.	.	.	V.
28.583	58.3207	1.56	Q	.	.	.	V.
28.667	58.3307	1.46	Q	.	.	.	V.
28.750	58.3401	1.36	Q	.	.	.	V.
28.833	58.3488	1.27	Q	.	.	.	V.
28.917	58.3570	1.19	Q	.	.	.	V.
29.000	58.3647	1.11	Q	.	.	.	V.
29.083	58.3719	1.05	Q	.	.	.	V.
29.167	58.3787	0.99	Q	.	.	.	V.
29.250	58.3851	0.93	Q	.	.	.	V.
29.333	58.3911	0.87	Q	.	.	.	V.
29.417	58.3967	0.82	Q	.	.	.	V.
29.500	58.4020	0.76	Q	.	.	.	V.
29.583	58.4068	0.71	Q	.	.	.	V.
29.667	58.4114	0.66	Q	.	.	.	V.
29.750	58.4156	0.61	Q	.	.	.	V.
29.833	58.4195	0.57	Q	.	.	.	V.
29.917	58.4232	0.53	Q	.	.	.	V.
30.000	58.4266	0.50	Q	.	.	.	V.
30.083	58.4298	0.46	Q	.	.	.	V.
30.167	58.4327	0.43	Q	.	.	.	V.
30.250	58.4355	0.40	Q	.	.	.	V.
30.333	58.4380	0.37	Q	.	.	.	V.
30.417	58.4404	0.35	Q	.	.	.	V.
30.500	58.4427	0.33	Q	.	.	.	V.
30.583	58.4448	0.31	Q	.	.	.	V.
30.667	58.4467	0.29	Q	.	.	.	V.
30.750	58.4486	0.27	Q	.	.	.	V.
30.833	58.4503	0.25	Q	.	.	.	V.
30.917	58.4518	0.23	Q	.	.	.	V.
31.000	58.4533	0.21	Q	.	.	.	V.
31.083	58.4546	0.19	Q	.	.	.	V.
31.167	58.4558	0.18	Q	.	.	.	V.
31.250	58.4571	0.18	Q	.	.	.	V.
31.333	58.4582	0.17	Q	.	.	.	V.
31.417	58.4594	0.17	Q	.	.	.	V.
31.500	58.4605	0.16	Q	.	.	.	V.
31.583	58.4616	0.16	Q	.	.	.	V.
31.667	58.4626	0.15	Q	.	.	.	V.
31.750	58.4636	0.14	Q	.	.	.	V.
31.833	58.4645	0.14	Q	.	.	.	V.
31.917	58.4655	0.13	Q	.	.	.	V.
32.000	58.4664	0.13	Q	.	.	.	V.
32.083	58.4672	0.12	Q	.	.	.	V.
32.167	58.4680	0.12	Q	.	.	.	V.
32.250	58.4688	0.11	Q	.	.	.	V.
32.333	58.4695	0.11	Q	.	.	.	V.
32.417	58.4702	0.10	Q	.	.	.	V.
32.500	58.4709	0.10	Q	.	.	.	V.
32.583	58.4715	0.09	Q	.	.	.	V.
32.667	58.4721	0.09	Q	.	.	.	V.
32.750	58.4727	0.08	Q	.	.	.	V.
32.833	58.4733	0.08	Q	.	.	.	V.
32.917	58.4738	0.07	Q	.	.	.	V.

33.000	58.4742	0.07	Q	.	.	.	V.
33.083	58.4747	0.06	Q	.	.	.	V.
33.167	58.4751	0.06	Q	.	.	.	V.
33.250	58.4755	0.05	Q	.	.	.	V.
33.333	58.4758	0.05	Q	.	.	.	V.
33.417	58.4761	0.05	Q	.	.	.	V.
33.500	58.4764	0.04	Q	.	.	.	V.
33.583	58.4766	0.04	Q	.	.	.	V.
33.667	58.4769	0.03	Q	.	.	.	V.
33.750	58.4770	0.03	Q	.	.	.	V.
33.833	58.4772	0.02	Q	.	.	.	V.
33.917	58.4773	0.02	Q	.	.	.	V.
34.000	58.4774	0.01	Q	.	.	.	V.
34.083	58.4775	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%	2045.0
10%	780.0
20%	410.0
30%	330.0
40%	250.0
50%	215.0
60%	170.0
70%	130.0
80%	75.0
90%	35.0

END OF FLOODSCx ROUTING ANALYSIS

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______________________________________________________________________________
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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 2-YR EV DEC 2022 ROKAMOTO                                             *
 ************************************************************************

  FILE NAME: EV0234US.DAT
  TIME/DATE OF STUDY: 16:42 12/12/2022


                       ** INPUT SUMMARY **


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==============================================================================
  WATERSHED AREA =   62698.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    6.120 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.571; LOW LOSS FRACTION = 0.909
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.15; 30-MINUTE =  0.29;  1-HOUR =  0.41
    3-HOUR =  0.74;    6-HOUR =  1.09; 24-HOUR =  1.90
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936
==============================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0234US.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0       757.5|
21.000 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
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___________________________________________________________________________
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             Ver. 20.0  Release Date: 06/01/2013  License ID 1237

                           Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
 * RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C                                 *
 * PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
 * 5-YR EV DEC 2022 ROKAMOTO                                                *
 **************************************************************************

  FILE NAME: EV0533CS.DAT
  TIME/DATE OF STUDY: 16:27 12/12/2022


                          ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   60992.301 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.690 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.478; LOW LOSS FRACTION = 0.833
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.22; 30-MINUTE =  0.44;  1-HOUR =  0.60
    3-HOUR =  1.11;    6-HOUR =  1.63; 24-HOUR =  2.85
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936
============================================================================
```



```
 +--------------------------------------------------------------------------------
--------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0533CS.DAT   ]
Page:   1 of    |
 +---------------------+--------------------------------+-----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +---------------------+--------------------------------+-----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0      2686.9|
19.083 |             |           |
 +---------------------+--------------------------------+-----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                            |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                    |
 +--------------------------------------------------------------------------------
--------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 5-YR EV OCT 2022 ROKAMOTO                                             *
 ************************************************************************

  FILE NAME: EV0533TS.DAT
  TIME/DATE OF STUDY: 11:09 10/25/2022


************************************************************************
  FLOW PROCESS FROM NODE  13010.00 TO NODE    133.00 IS CODE =   1
------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    6638.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.476 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.398
         LOW LOSS FRACTION = 0.764
         *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 = 0.744
          30-MINUTE FACTOR = 0.744
           1-HOUR FACTOR = 0.744
           3-HOUR FACTOR = 0.959
           6-HOUR FACTOR = 0.978
          24-HOUR FACTOR = 0.986

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.646
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.323	259.003
2	0.968	518.007
3	1.613	518.007
4	2.395	627.561
5	3.375	786.931
6	4.664	1035.145
7	6.627	1575.320
8	9.247	2103.244
9	12.120	2306.832
10	15.417	2646.715
11	18.685	2623.797
12	22.220	2837.612
13	25.899	2953.907
14	29.528	2913.452
15	33.973	3568.024
16	38.060	3281.204
17	43.093	4040.775
18	48.517	4353.888
19	53.219	3774.959
20	57.323	3294.676
21	62.494	4151.480
22	66.744	3412.430
23	70.701	3176.293
24	74.245	2845.430
25	77.255	2416.385
26	79.777	2024.205
27	82.348	2064.231
28	84.667	1861.980
29	86.661	1600.647
30	88.292	1309.248
31	89.632	1075.612
32	90.862	987.854
33	92.034	940.710
34	93.121	872.950
35	94.113	796.223
36	94.848	590.162
37	95.565	575.572
38	96.173	487.545
39	96.617	356.869
40	97.060	355.344
41	97.503	355.620
42	97.921	336.185
43	98.093	137.609
44	98.199	84.843
45	98.305	85.259
46	98.411	84.983
47	98.516	84.983
48	98.623	85.259

49	98.728	84.708
50	98.834	84.983
51	98.940	84.983
52	99.046	85.259
53	99.152	84.983
54	99.258	84.983
55	99.364	84.983
56	99.469	84.983
57	99.575	84.983
58	99.681	84.983
59	99.787	84.983
60	99.893	84.983
61	99.999	84.983
62	100.000	0.980

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 842.4324

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 314.8659

==========

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.	225.0	450.0	675.0	900.0
0.083	0.0012	0.17	Q	.	.	.	.
0.167	0.0046	0.50	Q	.	.	.	.
0.250	0.0104	0.84	Q	.	.	.	.
0.333	0.0190	1.25	Q	.	.	.	.
0.417	0.0312	1.76	Q	.	.	.	.
0.500	0.0480	2.44	Q	.	.	.	.
0.583	0.0719	3.47	Q	.	.	.	.
0.667	0.1053	4.84	Q	.	.	.	.
0.750	0.1490	6.36	Q	.	.	.	.
0.833	0.2048	8.09	Q	.	.	.	.
0.917	0.2724	9.82	Q	.	.	.	.
1.000	0.3529	11.69	Q	.	.	.	.
1.083	0.4469	13.64	Q	.	.	.	.
1.167	0.5541	15.58	Q	.	.	.	.
1.250	0.6777	17.94	Q	.	.	.	.
1.333	0.8163	20.13	Q	.	.	.	.
1.417	0.9734	22.81	VQ	.	.	.	.
1.500	1.1505	25.71	VQ	.	.	.	.
1.583	1.3450	28.24	VQ	.	.	.	.
1.667	1.5548	30.47	VQ	.	.	.	.
1.750	1.7839	33.27	VQ	.	.	.	.
1.833	2.0290	35.59	VQ	.	.	.	.
1.917	2.2891	37.77	VQ	.	.	.	.
2.000	2.5628	39.74	VQ	.	.	.	.
2.083	2.8482	41.44	VQ	.	.	.	.
2.167	3.1436	42.89	VQ	.	.	.	.
2.250	3.4493	44.38	VQ	.	.	.	.
2.333	3.7643	45.74	V Q	.	.	.	.
2.417	4.0875	46.94	V Q	.	.	.	.
2.500	4.4177	47.95	V Q	.	.	.	.
2.583	4.7539	48.81	V Q	.	.	.	.
2.667	5.0957	49.62	V Q	.	.	.	.
2.750	5.4428	50.41	V Q	.	.	.	.
2.833	5.7951	51.15	V Q	.	.	.	.
2.917	6.1522	51.85	V Q	.	.	.	.
3.000	6.5132	52.42	V Q	.	.	.	.
3.083	6.8781	52.98	V Q	.	.	.	.
3.167	7.2464	53.49	V Q	.	.	.	.
3.250	7.6177	53.91	V Q	.	.	.	.
3.333	7.9920	54.34	.VQ	.	.	.	.
3.417	8.3692	54.77	.VQ	.	.	.	.
3.500	8.7493	55.19	.VQ	.	.	.	.
3.583	9.1314	55.48	.VQ	.	.	.	.
3.667	9.5153	55.75	.VQ	.	.	.	.
3.750	9.9011	56.01	.VQ	.	.	.	.
3.833	10.2887	56.28	.VQ	.	.	.	.
3.917	10.6781	56.55	.VQ	.	.	.	.

4.000	11.0695	56.82	.VQ	.	.	.	.	.
4.083	11.4627	57.09	.VQ	.	.	.	.	.
4.167	11.8578	57.37	.VQ	.	.	.	.	.
4.250	12.2548	57.65	.VQ	.	.	.	.	.
4.333	12.6537	57.93	.VQ	.	.	.	.	.
4.417	13.0547	58.21	.VQ	.	.	.	.	.
4.500	13.4575	58.50	.VQ	.	.	.	.	.
4.583	13.8624	58.79	.VQ	.	.	.	.	.
4.667	14.2693	59.08	.VQ	.	.	.	.	.
4.750	14.6782	59.37	.VQ	.	.	.	.	.
4.833	15.0891	59.67	.VQ	.	.	.	.	.
4.917	15.5021	59.97	.VQ	.	.	.	.	.
5.000	15.9172	60.27	. Q	.	.	.	.	.
5.083	16.3344	60.58	. Q	.	.	.	.	.
5.167	16.7534	60.83	. Q	.	.	.	.	.
5.250	17.1741	61.09	. Q	.	.	.	.	.
5.333	17.5966	61.34	. Q	.	.	.	.	.
5.417	18.0209	61.61	. Q	.	.	.	.	.
5.500	18.4470	61.87	. Q	.	.	.	.	.
5.583	18.8749	62.14	. Q	.	.	.	.	.
5.667	19.3047	62.41	. Q	.	.	.	.	.
5.750	19.7365	62.68	. Q	.	.	.	.	.
5.833	20.1701	62.96	. Q	.	.	.	.	.
5.917	20.6056	63.24	. Q	.	.	.	.	.
6.000	21.0431	63.52	. Q	.	.	.	.	.
6.083	21.4826	63.81	. Q	.	.	.	.	.
6.167	21.9240	64.10	. Q	.	.	.	.	.
6.250	22.3675	64.39	. Q	.	.	.	.	.
6.333	22.8130	64.69	. Q	.	.	.	.	.
6.417	23.2606	64.99	. Q	.	.	.	.	.
6.500	23.7103	65.30	. QV	.	.	.	.	.
6.583	24.1622	65.61	. QV	.	.	.	.	.
6.667	24.6161	65.92	. QV	.	.	.	.	.
6.750	25.0723	66.23	. QV	.	.	.	.	.
6.833	25.5306	66.55	. QV	.	.	.	.	.
6.917	25.9912	66.88	. QV	.	.	.	.	.
7.000	26.4541	67.20	. QV	.	.	.	.	.
7.083	26.9192	67.54	. Q	.	.	.	.	.
7.167	27.3866	67.87	. Q	.	.	.	.	.
7.250	27.8564	68.22	. Q	.	.	.	.	.
7.333	28.3286	68.56	. Q	.	.	.	.	.
7.417	28.8032	68.91	. Q	.	.	.	.	.
7.500	29.2803	69.27	. Q	.	.	.	.	.
7.583	29.7598	69.63	. Q	.	.	.	.	.
7.667	30.2418	69.99	. Q	.	.	.	.	.
7.750	30.7264	70.36	. Q	.	.	.	.	.
7.833	31.2136	70.74	. Q	.	.	.	.	.
7.917	31.7034	71.12	. QV	.	.	.	.	.
8.000	32.1958	71.50	. QV	.	.	.	.	.
8.083	32.6910	71.90	. QV	.	.	.	.	.
8.167	33.1888	72.29	. QV	.	.	.	.	.
8.250	33.6895	72.70	. QV	.	.	.	.	.
8.333	34.1930	73.10	. QV	.	.	.	.	.
8.417	34.6993	73.52	. QV	.	.	.	.	.
8.500	35.2085	73.94	. QV	.	.	.	.	.
8.583	35.7207	74.37	. QV	.	.	.	.	.
8.667	36.2358	74.80	. QV	.	.	.	.	.
8.750	36.7540	75.24	. QV	.	.	.	.	.

8.833	37.2753	75.69	. QV	.	.	.	.	.
8.917	37.7997	76.15	. QV	.	.	.	.	.
9.000	38.3273	76.61	. QV	.	.	.	.	.
9.083	38.8581	77.08	. QV	.	.	.	.	.
9.167	39.3922	77.55	. Q V	.	.	.	.	.
9.250	39.9297	78.04	. Q V	.	.	.	.	.
9.333	40.4705	78.53	. Q V	.	.	.	.	.
9.417	41.0149	79.03	. Q V	.	.	.	.	.
9.500	41.5626	79.54	. Q V	.	.	.	.	.
9.583	42.1140	80.06	. Q V	.	.	.	.	.
9.667	42.6690	80.59	. Q V	.	.	.	.	.
9.750	43.2278	81.13	. Q V	.	.	.	.	.
9.833	43.7902	81.67	. Q V	.	.	.	.	.
9.917	44.3565	82.23	. Q V	.	.	.	.	.
10.000	44.9267	82.79	. Q V	.	.	.	.	.
10.083	45.5009	83.37	. Q V	.	.	.	.	.
10.167	46.0791	83.95	. Q V	.	.	.	.	.
10.250	46.6614	84.56	. Q V	.	.	.	.	.
10.333	47.2480	85.16	. Q V	.	.	.	.	.
10.417	47.8388	85.79	. Q V	.	.	.	.	.
10.500	48.4339	86.42	. Q V	.	.	.	.	.
10.583	49.0336	87.07	. Q V	.	.	.	.	.
10.667	49.6377	87.72	. Q V	.	.	.	.	.
10.750	50.2465	88.40	. Q V	.	.	.	.	.
10.833	50.8600	89.08	. Q V	.	.	.	.	.
10.917	51.4783	89.78	. Q V	.	.	.	.	.
11.000	52.1015	90.49	. Q V	.	.	.	.	.
11.083	52.7298	91.23	. Q V	.	.	.	.	.
11.167	53.3632	91.97	. Q V	.	.	.	.	.
11.250	54.0018	92.73	. Q V	.	.	.	.	.
11.333	54.6458	93.51	. Q V	.	.	.	.	.
11.417	55.2953	94.31	. Q V	.	.	.	.	.
11.500	55.9504	95.12	. Q V	.	.	.	.	.
11.583	56.6113	95.96	. Q V	.	.	.	.	.
11.667	57.2780	96.80	. Q V	.	.	.	.	.
11.750	57.9507	97.68	. Q V	.	.	.	.	.
11.833	58.6296	98.57	. Q V	.	.	.	.	.
11.917	59.3148	99.49	. Q V	.	.	.	.	.
12.000	60.0064	100.43	. Q V	.	.	.	.	.
12.083	60.7056	101.52	. Q V	.	.	.	.	.
12.167	61.4132	102.75	. Q V	.	.	.	.	.
12.250	62.1296	104.02	. Q V	.	.	.	.	.
12.333	62.8552	105.36	. Q V	.	.	.	.	.
12.417	63.5908	106.81	. Q V	.	.	.	.	.
12.500	64.3374	108.40	. Q V	.	.	.	.	.
12.583	65.0970	110.30	. Q V	.	.	.	.	.
12.667	65.8716	112.47	. Q V	.	.	.	.	.
12.750	66.6621	114.78	. Q V	.	.	.	.	.
12.833	67.4698	117.29	. Q V	.	.	.	.	.
12.917	68.2951	119.83	. Q V	.	.	.	.	.
13.000	69.1388	122.51	. Q V	.	.	.	.	.
13.083	70.0018	125.30	. Q V	.	.	.	.	.
13.167	70.8841	128.11	. Q V.	.	.	.	.	.
13.250	71.7883	131.29	. Q V.	.	.	.	.	.
13.333	72.7138	134.38	. Q V.	.	.	.	.	.
13.417	73.6635	137.89	. Q V.	.	.	.	.	.
13.500	74.6387	141.60	. Q V.	.	.	.	.	.
13.583	75.6381	145.11	. Q V.	.	.	.	.	.

13.667	76.6604	148.44	. Q V. . . .
13.750	77.7091	152.27	. Q V. . . .
13.833	78.7821	155.79	. Q V . . .
13.917	79.8792	159.30	. Q V . . .
14.000	80.9997	162.71	. Q V . . .
14.083	82.1452	166.33	. Q V . . .
14.167	83.3169	170.13	. Q V . . .
14.250	84.5158	174.07	. Q V . . .
14.333	85.7425	178.12	. Q V . . .
14.417	86.9985	182.36	. Q .V . . .
14.500	88.2852	186.84	. Q .V . . .
14.583	89.6075	191.99	. Q .V . . .
14.667	90.9699	197.82	. Q .V . . .
14.750	92.3750	204.02	. Q.V . . .
14.833	93.8260	210.69	. Q.V . . .
14.917	95.3237	217.47	. Q. V . . .
15.000	96.8700	224.52	. Q. V . . .
15.083	98.4671	231.89	. Q V . . .
15.167	100.1153	239.32	. Q V . . .
15.250	101.8212	247.70	. .QV . . .
15.333	103.5837	255.91	. .Q V . . .
15.417	105.4067	264.70	. .Q V . . .
15.500	107.2901	273.47	. . QV . . .
15.583	109.2312	281.85	. . QV . . .
15.667	111.2266	289.73	. . Q V . . .
15.750	113.2861	299.04	. . QV . . .
15.833	115.4053	307.70	. . QV . . .
15.917	117.5817	316.02	. . Q . . .
16.000	119.8272	326.05	. . QV . . .
16.083	122.3072	360.09	. . VQ . . .
16.167	125.0031	391.45	. . V Q . . .
16.250	127.7602	400.32	. . VQ . . .
16.333	130.6527	419.99	. . V Q . . .
16.417	133.7293	446.73	. . V Q. . . .
16.500	137.0741	485.67	. . V .Q . . .
16.583	140.8598	549.69	. . V . Q . . .
16.667	145.0597	609.82	. . V . Q . . .
16.750	149.4471	637.06	. . V . Q . . .
16.833	154.0719	671.51	. . V. Q. . .
16.917	158.7265	675.85	. . V Q . .
17.000	163.5582	701.57	. . V .Q . .
17.083	168.4892	715.97	. . .V .Q . .
17.167	173.4606	721.85	. . . V . Q . .
17.250	178.8666	784.95	. . . V . Q . .
17.333	184.1549	767.86	. . . V . Q . .
17.417	189.9587	842.71	. . . V . Q .
17.500	195.9175	865.22	. . . V . Q .
17.583	201.4521	803.61	. . . V . Q .
17.667	206.6686	757.44	. . . V . Q .
17.750	212.3445	824.14	. . . V . Q .
17.833	217.4760	745.08	. . . V . Q .
17.917	222.3559	708.57	. . . V .Q .
18.000	226.9090	661.11	. . . VQ. .
18.083	231.0908	607.20	. . . Q V. .
18.167	234.9413	559.09	. . . Q V. .
18.250	238.7211	548.82	. . . Q V .
18.333	242.2736	515.82	. . . Q V .
18.417	245.5452	475.04	. . .Q .V .

18.500	248.5165	431.44	. . Q. .V .
18.583	251.2467	396.42	. . Q . .V .
18.667	253.8377	376.22	. . Q . . V .
18.750	256.3086	358.78	. . Q . . V .
18.833	258.6474	339.59	. . Q . . V .
18.917	260.8447	319.05	. . Q . . V .
19.000	262.8324	288.61	. . Q . . V .
19.083	264.7348	276.22	. . Q . . V .
19.167	266.5095	257.69	. .Q . . V .
19.250	268.1350	236.03	. .Q . . V .
19.333	269.6974	226.86	. .Q . . V .
19.417	271.1975	217.81	. .Q. . V .
19.500	272.6140	205.67	. .Q. . V .
19.583	273.8443	178.64	. Q . . V .
19.667	274.9916	166.59	. Q . . V .
19.750	276.0935	159.99	. Q . . V .
19.833	277.1559	154.26	. Q . . V .
19.917	278.1793	148.60	. Q . . V .
20.000	279.1674	143.48	. Q . . V .
20.083	280.1228	138.72	. Q . . V .
20.167	281.0491	134.50	. Q . . V .
20.250	281.9482	130.54	. Q . . V .
20.333	282.8216	126.83	. Q . . V .
20.417	283.6709	123.31	. Q . . V .
20.500	284.4993	120.28	. Q . . V .
20.583	285.3098	117.68	. Q . . V .
20.667	286.1035	115.25	. Q . . V .
20.750	286.8811	112.91	. Q . . V .
20.833	287.6425	110.55	. Q . . V .
20.917	288.3880	108.25	. Q . . V .
21.000	289.1173	105.90	. Q . . V .
21.083	289.8261	102.91	. Q . . V .
21.167	290.4659	92.90	. Q . . V .
21.250	291.0917	90.87	. Q . . V .
21.333	291.7062	89.23	. Q . . V .
21.417	292.3102	87.71	. Q . . V .
21.500	292.9031	86.09	. Q . . V .
21.583	293.4860	84.63	. Q . . V .
21.667	294.0594	83.26	. Q . . V .
21.750	294.6238	81.95	. Q . . V .
21.833	295.1794	80.68	. Q . . V .
21.917	295.7266	79.46	. Q . . V .
22.000	296.2657	78.27	. Q . . V .
22.083	296.7969	77.13	. Q . . V .
22.167	297.3211	76.12	. Q . . V .
22.250	297.8387	75.15	. Q . . V .
22.333	298.3498	74.21	. Q . . V .
22.417	298.8547	73.30	. Q . . V .
22.500	299.3535	72.42	. Q . . V .
22.583	299.8463	71.57	. Q . . V .
22.667	300.3335	70.74	. Q . . V .
22.750	300.8152	69.94	. Q . . V .
22.833	301.2914	69.15	. Q . . V .
22.917	301.7625	68.39	. Q . . V .
23.000	302.2284	67.65	. Q . . V .
23.083	302.6894	66.93	. Q . . V .
23.167	303.1458	66.27	. Q . . V .
23.250	303.5978	65.63	. Q . . V .

23.333	304.0455	65.00	. Q	.	.	.	V	.
23.417	304.4890	64.39	. Q	.	.	.	V	.
23.500	304.9283	63.80	. Q	.	.	.	V	.
23.583	305.3637	63.22	. Q	.	.	.	V	.
23.667	305.7951	62.65	. Q	.	.	.	V	.
23.750	306.2228	62.10	. Q	.	.	.	V	.
23.833	306.6467	61.56	. Q	.	.	.	V	.
23.917	307.0670	61.03	. Q	.	.	.		V.
24.000	307.4838	60.51	. Q	.	.	.		V.
24.083	307.8959	59.84	. Q	.	.	.		V.
24.167	308.3024	59.01	. Q	.	.	.		V.
24.250	308.7032	58.20	. Q	.	.	.		V.
24.333	309.0980	57.33	. Q	.	.	.		V.
24.417	309.4862	56.36	. Q	.	.	.		V.
24.500	309.8667	55.25	. Q	.	.	.		V.
24.583	310.2372	53.81	. Q	.	.	.		V.
24.667	310.5956	52.03	. Q	.	.	.		V.
24.750	310.9409	50.14	. Q	.	.	.		V.
24.833	311.2719	48.05	. Q	.	.	.		V.
24.917	311.5886	46.00	. Q	.	.	.		V.
25.000	311.8904	43.82	.Q	.	.	.		V.
25.083	312.1768	41.58	.Q	.	.	.		V.
25.167	312.4481	39.39	.Q	.	.	.		V.
25.250	312.7015	36.80	.Q	.	.	.		V.
25.333	312.9385	34.41	.Q	.	.	.		V.
25.417	313.1558	31.55	.Q	.	.	.		V.
25.500	313.3521	28.50	.Q	.	.	.		V.
25.583	313.5302	25.86	.Q	.	.	.		V.
25.667	313.6923	23.54	.Q	.	.	.		V.
25.750	313.8348	20.69	Q	.	.	.		V.
25.833	313.9610	18.33	Q	.	.	.		V.
25.917	314.0722	16.15	Q	.	.	.		V.
26.000	314.1700	14.19	Q	.	.	.		V.
26.083	314.2563	12.53	Q	.	.	.		V.
26.167	314.3329	11.13	Q	.	.	.		V.
26.250	314.3998	9.72	Q	.	.	.		V.
26.333	314.4579	8.44	Q	.	.	.		V.
26.417	314.5085	7.35	Q	.	.	.		V.
26.500	314.5529	6.45	Q	.	.	.		V.
26.583	314.5923	5.71	Q	.	.	.		V.
26.667	314.6269	5.03	Q	.	.	.		V.
26.750	314.6570	4.38	Q	.	.	.		V.
26.833	314.6831	3.79	Q	.	.	.		V.
26.917	314.7054	3.24	Q	.	.	.		V.
27.000	314.7250	2.84	Q	.	.	.		V.
27.083	314.7419	2.45	Q	.	.	.		V.
27.167	314.7564	2.11	Q	.	.	.		V.
27.250	314.7693	1.87	Q	.	.	.		V.
27.333	314.7805	1.63	Q	.	.	.		V.
27.417	314.7900	1.38	Q	.	.	.		V.
27.500	314.7980	1.16	Q	.	.	.		V.
27.583	314.8053	1.06	Q	.	.	.		V.
27.667	314.8121	1.00	Q	.	.	.		V.
27.750	314.8186	0.93	Q	.	.	.		V.
27.833	314.8246	0.87	Q	.	.	.		V.
27.917	314.8302	0.81	Q	.	.	.		V.
28.000	314.8353	0.75	Q	.	.	.		V.
28.083	314.8401	0.69	Q	.	.	.		V.

28.167	314.8444	0.63	Q	.	.	.		V.
28.250	314.8484	0.57	Q	.	.	.		V.
28.333	314.8519	0.51	Q	.	.	.		V.
28.417	314.8550	0.45	Q	.	.	.		V.
28.500	314.8577	0.40	Q	.	.	.		V.
28.583	314.8600	0.34	Q	.	.	.		V.
28.667	314.8620	0.28	Q	.	.	.		V.
28.750	314.8635	0.22	Q	.	.	.		V.
28.833	314.8647	0.17	Q	.	.	.		V.
28.917	314.8654	0.11	Q	.	.	.		V.
29.000	314.8658	0.06	Q	.	.	.		V.
29.083	314.8658	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%	1745.0
10%	655.0
20%	325.0
30%	225.0
40%	165.0
50%	125.0
60%	105.0
70%	90.0
80%	60.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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                         Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U                                  *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
* 5-YR EV DEC 2022 ROKAMOTO                                                 *
 **************************************************************************

  FILE NAME: EV0533US.DAT
  TIME/DATE OF STUDY: 16:27 12/12/2022


                        ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   54354.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.690 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.488; LOW LOSS FRACTION = 0.840
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.22; 30-MINUTE =  0.44;  1-HOUR =  0.61
    3-HOUR =  1.13;    6-HOUR =  1.67; 24-HOUR =  2.94
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940
============================================================================
```



```
 +--------------------------------------------------------------------------------
--------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0533US.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0      2445.8|
19.083 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                             |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                     |
 +--------------------------------------------------------------------------------
--------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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             Ver. 20.0  Release Date: 06/01/2013  License ID 1237

                          Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C                                  *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                 *
* 5-YR EV DEC 2022 ROKAMOTO                                                 *
 **************************************************************************

  FILE NAME: EV0534CS.DAT
  TIME/DATE OF STUDY: 16:28 12/12/2022


                         ** INPUT SUMMARY **


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==============================================================================
  WATERSHED AREA =   66557.602 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.827 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.476; LOW LOSS FRACTION = 0.831
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.22; 30-MINUTE =  0.44;  1-HOUR =  0.60
    3-HOUR =  1.09;    6-HOUR =  1.60; 24-HOUR =  2.79
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.294; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.741;    6-HOUR = 0.887; 24-HOUR = 0.933
==============================================================================
```



```
 +-----------------------------------------------------------------------------
------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0534CS.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0      2827.3|
19.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                         |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                 |
 +-----------------------------------------------------------------------------
------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 5-YR EV OCT 2022 ROKAMOTO                                             *
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  FILE NAME: EV0534TS.DAT
  TIME/DATE OF STUDY: 11:10 10/25/2022


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  FLOW PROCESS FROM NODE  13500.00 TO NODE    134.00 IS CODE =   1
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  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
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      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3859.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.180 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.473
         LOW LOSS FRACTION = 0.843
         *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 = 0.828
          30-MINUTE FACTOR = 0.828
           1-HOUR FACTOR = 0.828
           3-HOUR FACTOR = 0.974
           6-HOUR FACTOR = 0.987
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.823
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.218	101.962
2	0.655	203.924
3	1.092	203.924
4	1.529	203.924
5	1.986	213.398
6	2.613	292.547
7	3.278	310.320
8	3.990	332.614
9	5.118	526.172
10	6.458	625.643
11	8.120	775.661
12	10.093	920.919
13	12.016	898.059
14	14.050	949.349
15	16.610	1194.656
16	18.667	960.400
17	20.889	1037.271
18	23.644	1286.023
19	25.982	1091.230
20	28.312	1087.328
21	31.086	1295.291
22	34.292	1496.455
23	36.937	1234.690
24	40.030	1443.382
25	43.540	1638.799
26	47.122	1671.906
27	50.921	1773.104
28	53.707	1300.404
29	56.394	1254.148
30	59.639	1515.081
31	63.313	1714.791
32	66.090	1296.348
33	68.775	1253.182
34	71.351	1202.708
35	73.748	1118.818
36	76.025	1062.860
37	77.789	823.411
38	79.490	794.013
39	81.256	824.362
40	82.945	788.116
41	84.500	725.804
42	85.927	666.121
43	87.142	567.324
44	88.236	510.679
45	89.143	423.214
46	90.028	413.257
47	90.843	380.162
48	91.647	375.632

49	92.409	355.600
50	93.137	339.859
51	93.853	334.132
52	94.395	253.163
53	94.881	226.692
54	95.366	226.571
55	95.849	225.022
56	96.208	167.900
57	96.508	140.001
58	96.808	139.997
59	97.108	139.876
60	97.408	140.001
61	97.707	139.876
62	97.976	125.332
63	98.073	45.552
64	98.145	33.390
65	98.217	33.625
66	98.288	33.273
67	98.360	33.387
68	98.432	33.512
69	98.504	33.625
70	98.575	33.390
71	98.647	33.390
72	98.719	33.629
73	98.790	33.387
74	98.862	33.390
75	98.933	33.390
76	99.005	33.625
77	99.077	33.390
78	99.148	33.390
79	99.220	33.390
80	99.292	33.390
81	99.363	33.390
82	99.435	33.390
83	99.506	33.390
84	99.578	33.390
85	99.649	33.390
86	99.721	33.390
87	99.792	33.390
88	99.864	33.390
89	99.935	33.390
90	100.000	30.196

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 539.9012

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 136.9404

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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.	100.0	200.0	300.0	400.0
0.083	0.0003	0.04	Q	.	.	.	.
0.167	0.0012	0.13	Q	.	.	.	.
0.250	0.0027	0.22	Q	.	.	.	.
0.333	0.0049	0.31	Q	.	.	.	.
0.417	0.0076	0.40	Q	.	.	.	.
0.500	0.0113	0.53	Q	.	.	.	.
0.583	0.0158	0.66	Q	.	.	.	.
0.667	0.0214	0.81	Q	.	.	.	.
0.750	0.0286	1.04	Q	.	.	.	.
0.833	0.0376	1.31	Q	.	.	.	.
0.917	0.0490	1.65	Q	.	.	.	.
1.000	0.0632	2.05	Q	.	.	.	.
1.083	0.0800	2.45	Q	.	.	.	.
1.167	0.0997	2.87	Q	.	.	.	.
1.250	0.1231	3.39	Q	.	.	.	.
1.333	0.1494	3.81	Q	.	.	.	.
1.417	0.1788	4.27	Q	.	.	.	.
1.500	0.2122	4.84	Q	.	.	.	.
1.583	0.2489	5.33	Q	.	.	.	.
1.667	0.2889	5.82	Q	.	.	.	.
1.750	0.3330	6.39	Q	.	.	.	.
1.833	0.3816	7.06	Q	.	.	.	.
1.917	0.4340	7.62	Q	.	.	.	.
2.000	0.4910	8.26	Q	.	.	.	.
2.083	0.5529	9.00	Q	.	.	.	.
2.167	0.6201	9.75	Q	.	.	.	.
2.250	0.6927	10.55	VQ	.	.	.	.
2.333	0.7695	11.14	VQ	.	.	.	.
2.417	0.8502	11.72	VQ	.	.	.	.
2.500	0.9358	12.42	VQ	.	.	.	.
2.583	1.0267	13.20	VQ	.	.	.	.
2.667	1.1217	13.80	VQ	.	.	.	.
2.750	1.2208	14.39	VQ	.	.	.	.
2.833	1.3239	14.96	VQ	.	.	.	.
2.917	1.4306	15.49	VQ	.	.	.	.
3.000	1.5408	16.01	VQ	.	.	.	.
3.083	1.6539	16.42	VQ	.	.	.	.
3.167	1.7697	16.82	VQ	.	.	.	.
3.250	1.8884	17.23	VQ	.	.	.	.
3.333	2.0099	17.63	VQ	.	.	.	.
3.417	2.1339	18.01	VQ	.	.	.	.
3.500	2.2604	18.36	VQ	.	.	.	.
3.583	2.3890	18.67	VQ	.	.	.	.
3.667	2.5196	18.96	VQ	.	.	.	.
3.750	2.6519	19.21	VQ	.	.	.	.
3.833	2.7859	19.46	VQ	.	.	.	.
3.917	2.9216	19.70	VQ	.	.	.	.

4.000	3.0588	19.93	VQ	.	.	.	.
4.083	3.1977	20.16	V Q	.	.	.	.
4.167	3.3380	20.38	V Q	.	.	.	.
4.250	3.4799	20.60	.VQ	.	.	.	.
4.333	3.6231	20.79	.VQ	.	.	.	.
4.417	3.7675	20.96	.VQ	.	.	.	.
4.500	3.9131	21.14	.VQ	.	.	.	.
4.583	4.0599	21.32	.VQ	.	.	.	.
4.667	4.2078	21.48	.VQ	.	.	.	.
4.750	4.3567	21.62	.VQ	.	.	.	.
4.833	4.5066	21.76	.VQ	.	.	.	.
4.917	4.6575	21.91	.VQ	.	.	.	.
5.000	4.8094	22.06	.VQ	.	.	.	.
5.083	4.9623	22.20	.VQ	.	.	.	.
5.167	5.1162	22.35	.VQ	.	.	.	.
5.250	5.2709	22.46	.VQ	.	.	.	.
5.333	5.4262	22.56	.VQ	.	.	.	.
5.417	5.5824	22.67	.VQ	.	.	.	.
5.500	5.7392	22.78	.VQ	.	.	.	.
5.583	5.8968	22.88	.VQ	.	.	.	.
5.667	6.0552	22.99	.VQ	.	.	.	.
5.750	6.2143	23.10	.VQ	.	.	.	.
5.833	6.3742	23.22	.VQ	.	.	.	.
5.917	6.5348	23.33	.VQ	.	.	.	.
6.000	6.6963	23.44	.VQ	.	.	.	.
6.083	6.8585	23.56	. Q	.	.	.	.
6.167	7.0216	23.67	. Q	.	.	.	.
6.250	7.1854	23.79	. Q	.	.	.	.
6.333	7.3501	23.91	. Q	.	.	.	.
6.417	7.5156	24.03	. Q	.	.	.	.
6.500	7.6819	24.15	. Q	.	.	.	.
6.583	7.8491	24.27	. Q	.	.	.	.
6.667	8.0171	24.40	. Q	.	.	.	.
6.750	8.1860	24.52	. Q	.	.	.	.
6.833	8.3557	24.65	. Q	.	.	.	.
6.917	8.5264	24.78	. Q	.	.	.	.
7.000	8.6979	24.91	. Q	.	.	.	.
7.083	8.8703	25.04	. Q	.	.	.	.
7.167	9.0437	25.17	. Q	.	.	.	.
7.250	9.2179	25.30	. Q	.	.	.	.
7.333	9.3931	25.44	. Q	.	.	.	.
7.417	9.5693	25.58	. Q	.	.	.	.
7.500	9.7464	25.71	. Q	.	.	.	.
7.583	9.9243	25.84	. Q	.	.	.	.
7.667	10.1032	25.97	. Q	.	.	.	.
7.750	10.2829	26.10	. QV	.	.	.	.
7.833	10.4635	26.23	. QV	.	.	.	.
7.917	10.6450	26.36	. QV	.	.	.	.
8.000	10.8275	26.49	. QV	.	.	.	.
8.083	11.0109	26.63	. QV	.	.	.	.
8.167	11.1953	26.77	. QV	.	.	.	.
8.250	11.3806	26.91	. QV	.	.	.	.
8.333	11.5669	27.05	. QV	.	.	.	.
8.417	11.7541	27.19	. QV	.	.	.	.
8.500	11.9424	27.34	. QV	.	.	.	.
8.583	12.1317	27.49	. QV	.	.	.	.
8.667	12.3221	27.64	. QV	.	.	.	.
8.750	12.5135	27.79	. QV	.	.	.	.

8.833	12.7059	27.94	. QV	.	.	.	.
8.917	12.8994	28.10	. QV	.	.	.	.
9.000	13.0941	28.26	. QV	.	.	.	.
9.083	13.2898	28.42	. QV	.	.	.	.
9.167	13.4867	28.59	. QV	.	.	.	.
9.250	13.6847	28.75	. QV	.	.	.	.
9.333	13.8839	28.92	. Q V	.	.	.	.
9.417	14.0843	29.09	. Q V	.	.	.	.
9.500	14.2858	29.27	. Q V	.	.	.	.
9.583	14.4886	29.44	. Q V	.	.	.	.
9.667	14.6926	29.62	. Q V	.	.	.	.
9.750	14.8979	29.81	. Q V	.	.	.	.
9.833	15.1045	29.99	. Q V	.	.	.	.
9.917	15.3124	30.18	. QV	.	.	.	.
10.000	15.5216	30.38	. QV	.	.	.	.
10.083	15.7321	30.57	. QV	.	.	.	.
10.167	15.9440	30.77	. QV	.	.	.	.
10.250	16.1574	30.97	. QV	.	.	.	.
10.333	16.3721	31.18	. QV	.	.	.	.
10.417	16.5883	31.39	. QV	.	.	.	.
10.500	16.8059	31.60	. QV	.	.	.	.
10.583	17.0251	31.82	. QV	.	.	.	.
10.667	17.2457	32.04	. Q V	.	.	.	.
10.750	17.4679	32.27	. Q V	.	.	.	.
10.833	17.6917	32.50	. Q V	.	.	.	.
10.917	17.9172	32.73	. Q V	.	.	.	.
11.000	18.1442	32.97	. Q V	.	.	.	.
11.083	18.3730	33.21	. Q V	.	.	.	.
11.167	18.6034	33.46	. Q V	.	.	.	.
11.250	18.8356	33.71	. Q V	.	.	.	.
11.333	19.0696	33.97	. Q V	.	.	.	.
11.417	19.3054	34.24	. Q V	.	.	.	.
11.500	19.5430	34.51	. Q V	.	.	.	.
11.583	19.7825	34.78	. Q V	.	.	.	.
11.667	20.0240	35.06	. Q V	.	.	.	.
11.750	20.2675	35.35	. Q V	.	.	.	.
11.833	20.5129	35.64	. Q V	.	.	.	.
11.917	20.7605	35.94	. Q V	.	.	.	.
12.000	21.0101	36.25	. Q V	.	.	.	.
12.083	21.2622	36.59	. Q V	.	.	.	.
12.167	21.5168	36.98	. Q V	.	.	.	.
12.250	21.7742	37.37	. Q V	.	.	.	.
12.333	22.0343	37.77	. Q V	.	.	.	.
12.417	22.2972	38.18	. Q V	.	.	.	.
12.500	22.5632	38.62	. Q V	.	.	.	.
12.583	22.8323	39.08	. Q V	.	.	.	.
12.667	23.1047	39.55	. Q V	.	.	.	.
12.750	23.3808	40.09	. Q V	.	.	.	.
12.833	23.6609	40.67	. Q V	.	.	.	.
12.917	23.9454	41.31	. Q V	.	.	.	.
13.000	24.2348	42.01	. Q V	.	.	.	.
13.083	24.5289	42.71	. Q V	.	.	.	.
13.167	24.8280	43.44	. Q V	.	.	.	.
13.250	25.1328	44.25	. Q V	.	.	.	.
13.333	25.4428	45.01	. Q V	.	.	.	.
13.417	25.7583	45.81	. Q V	.	.	.	.
13.500	26.0800	46.70	. Q V	.	.	.	.
13.583	26.4074	47.55	. Q V	.	.	.	.

13.667	26.7408	48.41	. Q V . . . .
13.750	27.0808	49.36	. Q V . . . .
13.833	27.4278	50.38	. Q V . . . .
13.917	27.7814	51.35	. Q V . . . .
14.000	28.1423	52.40	. Q V . . . .
14.083	28.5114	53.59	. Q V . . . .
14.167	28.8893	54.87	. Q V . . . .
14.250	29.2763	56.20	. Q V . . . .
14.333	29.6718	57.42	. Q V . . . .
14.417	30.0758	58.66	. Q V . . . .
14.500	30.4893	60.05	. Q V . . . .
14.583	30.9131	61.54	. Q V. . . . .
14.667	31.3467	62.95	. Q V. . . . .
14.750	31.7909	64.50	. Q V. . . . .
14.833	32.2462	66.11	. Q V. . . . .
14.917	32.7133	67.83	. Q V. . . . .
15.000	33.1930	69.65	. Q V. . . . .
15.083	33.6850	71.44	. Q V. . . . .
15.167	34.1898	73.30	. Q V. . . . .
15.250	34.7089	75.36	. Q V . . . .
15.333	35.2416	77.36	. Q V . . . .
15.417	35.7879	79.32	. Q V . . . .
15.500	36.3482	81.35	. Q V . . . .
15.583	36.9222	83.35	. Q V . . . .
15.667	37.5107	85.45	. Q V . . . .
15.750	38.1156	87.83	. Q .V . . . .
15.833	38.7386	90.45	. Q.V . . . .
15.917	39.3807	93.24	. Q.V . . . .
16.000	40.0516	97.42	. Q.V . . . .
16.083	40.8248	112.26	. .Q . . . .
16.167	41.6927	126.02	. . Q . . . .
16.250	42.5803	128.87	. . Q . . . .
16.333	43.4852	131.40	. . VQ . . . .
16.417	44.4220	136.02	. . VQ . . . .
16.500	45.4396	147.77	. . VQ . . . .
16.583	46.4962	153.41	. . V Q . . . .
16.667	47.6088	161.55	. . V Q . . . .
16.750	48.8951	186.77	. . V Q . . . .
16.833	50.2891	202.41	. . V Q . . . .
16.917	51.8261	223.17	. . V . Q . . . .
17.000	53.4872	241.19	. . V . Q . . . .
17.083	55.1535	241.95	. . V . Q . . . .
17.167	56.8862	251.59	. . V . Q . . . .
17.250	58.7937	276.97	. . V . Q . . . .
17.333	60.5507	255.11	. . V . Q . . . .
17.417	62.3872	266.67	. . V . Q . . . .
17.500	64.3982	291.99	. . V . Q. . . .
17.583	66.2765	272.73	. . V. Q . . . .
17.667	68.1762	275.84	. . V. Q . . . .
17.750	70.2489	300.96	. . V Q . . . .
17.833	72.4571	320.62	. . .V . Q . . .
17.917	74.4933	295.66	. . .V Q. . . .
18.000	76.6932	319.42	. . . V .Q . . .
18.083	79.0369	340.31	. . . V . Q . . .
18.167	81.4043	343.75	. . . V . Q . . .
18.250	83.7976	347.51	. . . V . Q . . .
18.333	85.8330	295.53	. . . V Q. . . .
18.417	87.8431	291.87	. . . V Q. . . .

18.500	90.0432	319.46	. . . V .Q . .
18.583	92.3445	334.14	. . . V . Q . .
18.667	94.3169	286.39	. . . VQ . . . .
18.750	96.2250	277.06	. . . QV . . . .
18.833	98.0654	267.23	. . . Q V . . . .
18.917	99.8178	254.44	. . . Q V. . . .
19.000	101.4857	242.18	. . . Q V. . . .
19.083	102.9527	213.01	. . .Q V . . . .
19.167	104.3753	206.56	. . Q V . . . .
19.250	105.7922	205.74	. . Q V . . . .
19.333	107.1552	197.90	. . Q. .V . . .
19.417	108.4422	186.88	. . Q . .V . . .
19.500	109.6511	175.53	. . Q . . V . .
19.583	110.7568	160.56	. . Q . . V . .
19.667	111.7914	150.22	. . Q . . V . .
19.750	112.7392	137.63	. . Q . . V . .
19.833	113.6558	133.08	. . Q . . V . .
19.917	114.5280	126.65	. . Q . . V . .
20.000	115.3757	123.08	. . Q . . V . .
20.083	116.1885	118.02	. .Q . . V . .
20.167	116.9699	113.46	. .Q . . V . .
20.250	117.7218	109.17	. . Q . . V . .
20.333	118.3951	97.76	. . Q. . V . .
20.417	119.0318	92.45	. . Q. . V . .
20.500	119.6514	89.97	. . Q . . V . .
20.583	120.2503	86.96	. . Q . . V . .
20.667	120.7916	78.59	. . Q . . V . .
20.750	121.2991	73.70	. . Q . . V . .
20.833	121.7944	71.91	. . Q . . V . .
20.917	122.2780	70.21	. . Q . . V . .
21.000	122.7497	68.49	. . Q . . V . .
21.083	123.2081	66.56	. . Q . . V . .
21.167	123.6386	62.51	. . Q . . V . .
21.250	123.9993	52.38	. . Q . . V . .
21.333	124.3414	49.66	. Q . . . V . .
21.417	124.6753	48.49	. Q . . . V . .
21.500	125.0017	47.39	. Q . . . V . .
21.583	125.3206	46.31	. Q . . . V . .
21.667	125.6328	45.33	. Q . . . V . .
21.750	125.9388	44.43	. Q . . . V . .
21.833	126.2387	43.54	. Q . . . V . .
21.917	126.5329	42.72	. Q . . . V . .
22.000	126.8218	41.95	. Q . . . V . .
22.083	127.1053	41.17	. Q . . . V . .
22.167	127.3839	40.45	. Q . . . V . .
22.250	127.6580	39.79	. Q . . . V . .
22.333	127.9280	39.21	. Q . . . V . .
22.417	128.1938	38.60	. Q . . . V . .
22.500	128.4558	38.04	. Q . . . V . .
22.583	128.7140	37.49	. Q . . . V . .
22.667	128.9686	36.97	. Q . . . V . .
22.750	129.2197	36.46	. Q . . . V . .
22.833	129.4674	35.97	. Q . . . V . .
22.917	129.7121	35.53	. Q . . . V . .
23.000	129.9538	35.09	. Q . . . V . .
23.083	130.1925	34.65	. Q . . . V . .
23.167	130.4281	34.22	. Q . . . V . .
23.250	130.6608	33.79	. Q . . . V . .

23.333	130.8905	33.34	. Q	.	.	.	V	.
23.417	131.1165	32.82	. Q	.	.	.	V	.
23.500	131.3349	31.70	. Q	.	.	.	V	.
23.583	131.5282	28.07	. Q	.	.	.	V	.
23.667	131.7186	27.65	. Q	.	.	.	V	.
23.750	131.9066	27.30	. Q	.	.	.	V	.
23.833	132.0924	26.98	. Q	.	.	.	V	.
23.917	132.2758	26.63	. Q	.	.	.	V	.
24.000	132.4570	26.31	. Q	.	.	.	V	.
24.083	132.6357	25.95	. Q	.	.	.	V	.
24.167	132.8117	25.56	. Q	.	.	.	V	.
24.250	132.9851	25.18	. Q	.	.	.	V	.
24.333	133.1559	24.81	. Q	.	.	.	V	.
24.417	133.3243	24.44	. Q	.	.	.	V	.
24.500	133.4899	24.05	. Q	.	.	.	V	.
24.583	133.6530	23.68	. Q	.	.	.	V	.
24.667	133.8134	23.30	. Q	.	.	.	V	.
24.750	133.9708	22.85	. Q	.	.	.	V	.
24.833	134.1248	22.36	. Q	.	.	.	V	.
24.917	134.2751	21.82	. Q	.	.	.	V	.
25.000	134.4212	21.22	. Q	.	.	.	V	.
25.083	134.5634	20.64	. Q	.	.	.	V	.
25.167	134.7014	20.04	. Q	.	.	.	V	.
25.250	134.8346	19.35	.Q	.	.	.	V	.
25.333	134.9638	18.76	.Q	.	.	.	V	.
25.417	135.0888	18.15	.Q	.	.	.	V	.
25.500	135.2089	17.43	.Q	.	.	.	V	.
25.583	135.3248	16.82	.Q	.	.	.	V	.
25.667	135.4364	16.22	.Q	.	.	.	V	.
25.750	135.5434	15.53	.Q	.	.	.	V	.
25.833	135.6451	14.76	.Q	.	.	.	V	.
25.917	135.7422	14.11	.Q	.	.	.	V	.
26.000	135.8344	13.38	.Q	.	.	.	V	.
26.083	135.9210	12.57	.Q	.	.	.	V	.
26.167	136.0019	11.75	.Q	.	.	.	V	.
26.250	136.0770	10.90	.Q	.	.	.	V	.
26.333	136.1476	10.25	.Q	.	.	.	V	.
26.417	136.2139	9.63	Q	.	.	.	V	.
26.500	136.2753	8.91	Q	.	.	.	V	.
26.583	136.3311	8.10	Q	.	.	.	V	.
26.667	136.3826	7.48	Q	.	.	.	V	.
26.750	136.4300	6.89	Q	.	.	.	V	.
26.833	136.4735	6.32	Q	.	.	.	V	.
26.917	136.5134	5.79	Q	.	.	.	V	.
27.000	136.5498	5.28	Q	.	.	.	V	.
27.083	136.5834	4.89	Q	.	.	.	V	.
27.167	136.6145	4.51	Q	.	.	.	V	.
27.250	136.6429	4.12	Q	.	.	.	V	.
27.333	136.6687	3.75	Q	.	.	.	V	.
27.417	136.6922	3.41	Q	.	.	.	V	.
27.500	136.7135	3.10	Q	.	.	.	V	.
27.583	136.7330	2.83	Q	.	.	.	V	.
27.667	136.7508	2.59	Q	.	.	.	V	.
27.750	136.7673	2.39	Q	.	.	.	V	.
27.833	136.7824	2.19	Q	.	.	.	V	.
27.917	136.7962	2.01	Q	.	.	.	V	.
28.000	136.8089	1.83	Q	.	.	.	V	.
28.083	136.8203	1.67	Q	.	.	.	V	.

28.167	136.8307	1.51	Q	.	.	.	V	.
28.250	136.8401	1.35	Q	.	.	.	V	.
28.333	136.8486	1.23	Q	.	.	.	V	.
28.417	136.8563	1.13	Q	.	.	.	V	.
28.500	136.8634	1.02	Q	.	.	.	V	.
28.583	136.8697	0.92	Q	.	.	.	V	.
28.667	136.8754	0.84	Q	.	.	.	V	.
28.750	136.8808	0.77	Q	.	.	.	V	.
28.833	136.8856	0.70	Q	.	.	.	V	.
28.917	136.8900	0.64	Q	.	.	.	V	.
29.000	136.8940	0.57	Q	.	.	.	V	.
29.083	136.8975	0.51	Q	.	.	.	V	.
29.167	136.9006	0.45	Q	.	.	.	V	.
29.250	136.9035	0.43	Q	.	.	.	V	.
29.333	136.9064	0.41	Q	.	.	.	V	.
29.417	136.9091	0.39	Q	.	.	.	V	.
29.500	136.9117	0.38	Q	.	.	.	V	.
29.583	136.9141	0.36	Q	.	.	.	V	.
29.667	136.9165	0.34	Q	.	.	.	V	.
29.750	136.9187	0.32	Q	.	.	.	V	.
29.833	136.9209	0.31	Q	.	.	.	V	.
29.917	136.9229	0.29	Q	.	.	.	V	.
30.000	136.9248	0.27	Q	.	.	.	V	.
30.083	136.9265	0.26	Q	.	.	.	V	.
30.167	136.9282	0.24	Q	.	.	.	V	.
30.250	136.9298	0.23	Q	.	.	.	V	.
30.333	136.9312	0.21	Q	.	.	.	V	.
30.417	136.9326	0.19	Q	.	.	.	V	.
30.500	136.9338	0.18	Q	.	.	.	V	.
30.583	136.9349	0.16	Q	.	.	.	V	.
30.667	136.9359	0.15	Q	.	.	.	V	.
30.750	136.9369	0.13	Q	.	.	.	V	.
30.833	136.9377	0.12	Q	.	.	.	V	.
30.917	136.9384	0.10	Q	.	.	.	V	.
31.000	136.9390	0.09	Q	.	.	.	V	.
31.083	136.9395	0.07	Q	.	.	.	V	.
31.167	136.9398	0.06	Q	.	.	.	V	.
31.250	136.9401	0.04	Q	.	.	.	V	.
31.333	136.9403	0.03	Q	.	.	.	V	.
31.417	136.9404	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%	1885.0
10%	690.0
20%	360.0
30%	255.0
40%	195.0
50%	170.0
60%	135.0
70%	110.0
80%	65.0
90%	35.0

==========

END OF FLOODSCx ROUTING ANALYSIS

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

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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 5-YR EV DEC 2022 ROKAMOTO                                             *
 ************************************************************************

  FILE NAME: EV0534US.DAT
  TIME/DATE OF STUDY: 16:28 12/12/2022


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   62698.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.827 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.476; LOW LOSS FRACTION = 0.831
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.22; 30-MINUTE =  0.44;  1-HOUR =  0.60
    3-HOUR =  1.10;    6-HOUR =  1.62; 24-HOUR =  2.83
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV0534US.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0      2748.9|
19.500 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C                                 *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
* 10-YR EV DEC 2022 ROKAMOTO                                               *
 ************************************************************************

  FILE NAME: EV1033CS.DAT
  TIME/DATE OF STUDY: 16:18 12/12/2022


                        ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   60992.301 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.727 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.287; LOW LOSS FRACTION = 0.740
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.31; 30-MINUTE =  0.62;  1-HOUR =  0.86
    3-HOUR =  1.58;    6-HOUR =  2.33; 24-HOUR =  4.07
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936
============================================================================
```



```
 +--------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV1033CS.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0      7464.7|
18.750 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                           |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                   |
 +--------------------------------------------------------------------------------
-------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 10-YR EV OCT 2022 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV1033TS.DAT
  TIME/DATE OF STUDY: 10:47 10/25/2022


******************************************************************************
  FLOW PROCESS FROM NODE  13010.00 TO NODE    133.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    6638.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.329 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.239
         LOW LOSS FRACTION = 0.699
         *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 = 0.744
          30-MINUTE FACTOR = 0.744
           1-HOUR FACTOR = 0.744
           3-HOUR FACTOR = 0.959
           6-HOUR FACTOR = 0.978
          24-HOUR FACTOR = 0.986

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.270
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.358	287.652
2	1.075	575.304
3	1.800	581.865
4	2.773	781.584
5	3.928	927.191
6	5.801	1503.663
7	8.455	2130.111
8	11.639	2556.440
9	15.197	2856.815
10	18.846	2929.289
11	22.862	3223.490
12	26.795	3157.661
13	31.145	3492.522
14	36.053	3940.381
15	41.024	3990.661
16	46.914	4728.452
17	52.511	4493.491
18	57.048	3642.370
19	62.703	4539.345
20	67.376	3751.681
21	71.660	3439.383
22	75.495	3078.355
23	78.482	2397.967
24	81.331	2287.694
25	84.018	2157.281
26	86.329	1855.022
27	88.187	1491.495
28	89.684	1201.988
29	91.043	1091.206
30	92.326	1029.381
31	93.521	959.863
32	94.479	768.440
33	95.275	639.161
34	96.018	596.893
35	96.536	415.356
36	97.028	394.973
37	97.519	394.721
38	97.960	353.837
39	98.120	128.783
40	98.238	94.275
41	98.355	94.397
42	98.473	94.520
43	98.590	94.152
44	98.708	94.520
45	98.826	94.275
46	98.943	94.526
47	99.061	94.269
48	99.178	94.269

49	99.296	94.269
50	99.413	94.269
51	99.530	94.269
52	99.648	94.269
53	99.765	94.269
54	99.883	94.269
55	100.000	94.152

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1043.2162
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 609.9843

==========

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.	500.0	1000.0	1500.0	2000.0
0.083	0.0023	0.34	Q	.	.	.	.
0.167	0.0094	1.02	Q	.	.	.	.
0.250	0.0211	1.71	Q	.	.	.	.
0.333	0.0393	2.64	Q	.	.	.	.
0.417	0.0651	3.74	Q	.	.	.	.
0.500	0.1032	5.53	Q	.	.	.	.
0.583	0.1587	8.06	Q	.	.	.	.
0.667	0.2352	11.11	Q	.	.	.	.
0.750	0.3352	14.52	Q	.	.	.	.
0.833	0.4593	18.02	Q	.	.	.	.
0.917	0.6101	21.89	Q	.	.	.	.
1.000	0.7870	25.69	Q	.	.	.	.
1.083	0.9929	29.90	Q	.	.	.	.
1.167	1.2316	34.65	Q	.	.	.	.
1.250	1.5035	39.48	Q	.	.	.	.
1.333	1.8147	45.19	Q	.	.	.	.
1.417	2.1635	50.65	VQ	.	.	.	.
1.500	2.5431	55.12	VQ	.	.	.	.
1.583	2.9609	60.66	VQ	.	.	.	.
1.667	3.4106	65.30	VQ	.	.	.	.
1.750	3.8898	69.58	VQ	.	.	.	.
1.833	4.3956	73.45	VQ	.	.	.	.
1.917	4.9227	76.53	VQ	.	.	.	.
2.000	5.4701	79.49	VQ	.	.	.	.
2.083	6.0370	82.31	VQ	.	.	.	.
2.167	6.6209	84.78	VQ	.	.	.	.
2.250	7.2190	86.84	VQ	.	.	.	.
2.333	7.8289	88.56	VQ	.	.	.	.
2.417	8.4498	90.15	VQ	.	.	.	.
2.500	9.0812	91.68	VQ	.	.	.	.
2.583	9.7227	93.14	VQ	.	.	.	.
2.667	10.3726	94.38	VQ	.	.	.	.
2.750	11.0301	95.47	VQ	.	.	.	.
2.833	11.6948	96.51	VQ	.	.	.	.
2.917	12.3653	97.35	VQ	.	.	.	.
3.000	13.0413	98.17	VQ	.	.	.	.
3.083	13.7231	98.99	VQ	.	.	.	.
3.167	14.4101	99.77	VQ	.	.	.	.
3.250	15.1008	100.28	V Q	.	.	.	.
3.333	15.7948	100.76	.VQ	.	.	.	.
3.417	16.4921	101.25	.VQ	.	.	.	.
3.500	17.1928	101.74	.VQ	.	.	.	.
3.583	17.8968	102.23	.VQ	.	.	.	.
3.667	18.6043	102.73	.VQ	.	.	.	.
3.750	19.3153	103.23	.VQ	.	.	.	.
3.833	20.0297	103.73	.VQ	.	.	.	.
3.917	20.7476	104.25	.VQ	.	.	.	.

4.000	21.4691	104.76	.VQ	.	.	.	.
4.083	22.1942	105.28	.VQ	.	.	.	.
4.167	22.9228	105.80	.VQ	.	.	.	.
4.250	23.6551	106.33	.VQ	.	.	.	.
4.333	24.3911	106.86	.VQ	.	.	.	.
4.417	25.1307	107.40	.VQ	.	.	.	.
4.500	25.8741	107.94	.VQ	.	.	.	.
4.583	26.6213	108.49	.VQ	.	.	.	.
4.667	27.3714	108.93	.VQ	.	.	.	.
4.750	28.1247	109.37	.VQ	.	.	.	.
4.833	28.8811	109.82	.VQ	.	.	.	.
4.917	29.6405	110.28	.VQ	.	.	.	.
5.000	30.4032	110.74	.VQ	.	.	.	.
5.083	31.1690	111.20	. Q	.	.	.	.
5.167	31.9381	111.67	. Q	.	.	.	.
5.250	32.7105	112.15	. Q	.	.	.	.
5.333	33.4862	112.63	. Q	.	.	.	.
5.417	34.2652	113.11	. Q	.	.	.	.
5.500	35.0476	113.61	. Q	.	.	.	.
5.583	35.8334	114.10	. Q	.	.	.	.
5.667	36.6227	114.61	. Q	.	.	.	.
5.750	37.4155	115.12	. Q	.	.	.	.
5.833	38.2119	115.63	. Q	.	.	.	.
5.917	39.0118	116.15	. Q	.	.	.	.
6.000	39.8154	116.68	. Q	.	.	.	.
6.083	40.6226	117.21	. Q	.	.	.	.
6.167	41.4336	117.75	. Q	.	.	.	.
6.250	42.2483	118.30	. Q	.	.	.	.
6.333	43.0668	118.85	. Q	.	.	.	.
6.417	43.8892	119.41	. Q	.	.	.	.
6.500	44.7154	119.97	. Q	.	.	.	.
6.583	45.5457	120.55	. Q	.	.	.	.
6.667	46.3799	121.13	. QV	.	.	.	.
6.750	47.2182	121.72	. QV	.	.	.	.
6.833	48.0606	122.31	. QV	.	.	.	.
6.917	48.9071	122.92	. QV	.	.	.	.
7.000	49.7578	123.53	. QV	.	.	.	.
7.083	50.6129	124.15	. QV	.	.	.	.
7.167	51.4722	124.78	. QV	.	.	.	.
7.250	52.3359	125.41	. QV	.	.	.	.
7.333	53.2041	126.06	. QV	.	.	.	.
7.417	54.0767	126.71	. QV	.	.	.	.
7.500	54.9540	127.37	. QV	.	.	.	.
7.583	55.8358	128.04	. QV	.	.	.	.
7.667	56.7223	128.72	. QV	.	.	.	.
7.750	57.6136	129.42	. QV	.	.	.	.
7.833	58.5097	130.11	. QV	.	.	.	.
7.917	59.4107	130.83	. QV	.	.	.	.
8.000	60.3167	131.54	. QV	.	.	.	.
8.083	61.2277	132.28	. Q V	.	.	.	.
8.167	62.1438	133.02	. Q V	.	.	.	.
8.250	63.0651	133.77	. Q V	.	.	.	.
8.333	63.9916	134.53	. Q V	.	.	.	.
8.417	64.9235	135.31	. Q V	.	.	.	.
8.500	65.8608	136.10	. Q V	.	.	.	.
8.583	66.8036	136.90	. Q V	.	.	.	.
8.667	67.7520	137.71	. Q V	.	.	.	.
8.750	68.7061	138.53	. Q V	.	.	.	.

8.833	69.6659	139.37	. Q V	.	.	.	.
8.917	70.6317	140.22	. Q V	.	.	.	.
9.000	71.6033	141.08	. Q V	.	.	.	.
9.083	72.5810	141.97	. Q V	.	.	.	.
9.167	73.5649	142.86	. Q V	.	.	.	.
9.250	74.5550	143.77	. Q V	.	.	.	.
9.333	75.5515	144.69	. Q V	.	.	.	.
9.417	76.5545	145.63	. Q V	.	.	.	.
9.500	77.5640	146.58	. Q V	.	.	.	.
9.583	78.5802	147.56	. Q V	.	.	.	.
9.667	79.6033	148.55	. Q V	.	.	.	.
9.750	80.6332	149.55	. Q V	.	.	.	.
9.833	81.6703	150.58	. Q V	.	.	.	.
9.917	82.7145	151.62	. Q V	.	.	.	.
10.000	83.7661	152.68	. Q V	.	.	.	.
10.083	84.8251	153.77	. Q V	.	.	.	.
10.167	85.8917	154.87	. Q V	.	.	.	.
10.250	86.9660	156.00	. Q V	.	.	.	.
10.333	88.0482	157.14	. Q V	.	.	.	.
10.417	89.1385	158.31	. Q V	.	.	.	.
10.500	90.2370	159.50	. Q V	.	.	.	.
10.583	91.3439	160.72	. Q V	.	.	.	.
10.667	92.4593	161.95	. Q V	.	.	.	.
10.750	93.5834	163.22	. Q V	.	.	.	.
10.833	94.7164	164.51	. Q V	.	.	.	.
10.917	95.8585	165.83	. Q V	.	.	.	.
11.000	97.0099	167.18	. Q V	.	.	.	.
11.083	98.1707	168.56	. Q V	.	.	.	.
11.167	99.3413	169.96	. Q V	.	.	.	.
11.250	100.5217	171.40	. Q V	.	.	.	.
11.333	101.7123	172.87	. Q V	.	.	.	.
11.417	102.9133	174.38	. Q V	.	.	.	.
11.500	104.1248	175.91	. Q V	.	.	.	.
11.583	105.3472	177.49	. Q V	.	.	.	.
11.667	106.5807	179.10	. Q V	.	.	.	.
11.750	107.8256	180.76	. Q V	.	.	.	.
11.833	109.0822	182.45	. Q V	.	.	.	.
11.917	110.3507	184.19	. Q V	.	.	.	.
12.000	111.6315	185.97	. Q V	.	.	.	.
12.083	112.9266	188.05	. Q V	.	.	.	.
12.167	114.2381	190.42	. Q V	.	.	.	.
12.250	115.5663	192.86	. Q V	.	.	.	.
12.333	116.9129	195.52	. Q V	.	.	.	.
12.417	118.2791	198.37	. Q V	.	.	.	.
12.500	119.6688	201.78	. Q V	.	.	.	.
12.583	121.0862	205.80	. Q V	.	.	.	.
12.667	122.5343	210.26	. Q V	.	.	.	.
12.750	124.0154	215.06	. Q V	.	.	.	.
12.833	125.5304	219.99	. Q V	.	.	.	.
12.917	127.0818	225.26	. Q V	.	.	.	.
13.000	128.6696	230.55	. Q V	.	.	.	.
13.083	130.2966	236.23	. Q V	.	.	.	.
13.167	131.9659	242.38	. Q V	.	.	.	.
13.250	133.6786	248.69	. Q V	.	.	.	.
13.333	135.4398	255.73	. Q V	.	.	.	.
13.417	137.2490	262.69	. Q V.	.	.	.	.
13.500	139.1017	269.01	. Q V.	.	.	.	.
13.583	141.0043	276.25	. Q V.	.	.	.	.

13.667	142.9527	282.91	. Q V. . . .
13.750	144.9462	289.45	. Q V. . . .
13.833	146.9834	295.80	. Q V. . . .
13.917	149.0614	301.73	. Q V. . . .
14.000	151.1805	307.70	. Q V. . . .
14.083	153.3455	314.36	. Q V . . .
14.167	155.5600	321.54	. Q V . . .
14.250	157.8232	328.62	. Q V . . .
14.333	160.1377	336.06	. Q V . . .
14.417	162.5063	343.93	. Q V . . .
14.500	164.9388	353.20	. Q V . . .
14.583	167.4458	364.01	. Q V . . .
14.667	170.0339	375.79	. Q .V . . .
14.750	172.7087	388.37	. Q .V . . .
14.833	175.4725	401.30	. Q .V . . .
14.917	178.3313	415.11	. Q .V . . .
15.000	181.2873	429.21	. Q .V . . .
15.083	184.3498	444.67	. Q . V . . .
15.167	187.5301	461.77	. Q. V . . .
15.250	190.8336	479.67	. Q. V . . .
15.333	194.2792	500.31	. Q V . . .
15.417	197.8572	519.53	. Q V . . .
15.500	201.5506	536.27	. Q V . . .
15.583	205.3850	556.76	. .Q V . . .
15.667	209.3525	576.09	. .Q V . . .
15.750	213.4697	597.80	. .Q V . . .
15.833	217.7351	619.34	. . Q V . . .
15.917	222.1560	641.92	. . Q V . . .
16.000	226.7948	673.55	. . QV . . .
16.083	231.9359	746.49	. . QV . . .
16.167	237.5821	819.83	. . VQ . . .
16.250	243.4872	857.42	. . V Q . . .
16.333	249.8962	930.58	. . V Q . . .
16.417	256.8848	1014.75	. . V Q . . .
16.500	264.8823	1161.23	. . V . Q . . .
16.583	273.8942	1308.53	. . V . Q . . .
16.667	283.5728	1405.33	. . V . Q . . .
16.750	293.7156	1472.73	. . V. Q. . .
16.833	304.1376	1513.28	. . V. Q . .
16.917	314.9688	1572.69	. . V .Q . .
17.000	325.9932	1600.74	. . .V . Q . .
17.083	337.5858	1683.24	. . . V . Q . .
17.167	349.8003	1773.55	. . . V . Q . .
17.250	362.2908	1813.62	. . . V . Q . .
17.333	375.4088	1904.73	. . . V . Q .
17.417	388.1396	1848.51	. . . V . Q .
17.500	399.9385	1713.20	. . . V . Q .
17.583	412.2568	1788.61	. . . V . Q .
17.667	423.5421	1638.63	. . . V . Q .
17.750	434.0847	1530.79	. . . V Q .
17.833	443.8102	1412.13	. . . QV. .
17.917	452.5499	1269.01	. . . Q V. .
18.000	460.8420	1204.01	. . . Q V .
18.083	468.6682	1136.37	. . . Q V .
18.167	475.8246	1039.11	. . Q .V .
18.250	482.2631	934.86	. . Q . .V .
18.333	488.1131	849.42	. . Q . . V .
18.417	493.6004	796.76	. . Q . . V .

18.500	498.7932	754.00	. . Q . . V .
18.583	503.6490	705.05	. . Q . . V .
18.667	508.0661	641.37	. . Q . . V .
18.750	512.1246	589.30	. .Q . . V .
18.833	515.9280	552.24	. .Q . . V .
18.917	519.3816	501.47	. Q . . V .
19.000	522.6464	474.05	. Q. . . V .
19.083	525.7354	448.52	. Q . . . V .
19.167	528.5942	415.10	. Q . . . V .
19.250	531.0753	360.25	. Q . . . V .
19.333	533.3902	336.13	. Q . . . V .
19.417	535.6087	322.13	. Q . . . V .
19.500	537.7453	310.23	. Q . . . V .
19.583	539.7878	296.58	. Q . . . V .
19.667	541.7483	284.66	. Q . . . V .
19.750	543.6349	273.94	. Q . . . V .
19.833	545.4546	264.21	. Q . . . V .
19.917	547.2157	255.71	. Q . . . V .
20.000	548.9261	248.35	. Q . . . V .
20.083	550.5882	241.34	. Q . . . V .
20.167	552.2056	234.84	. Q . . . V .
20.250	553.7849	229.31	. Q . . . V .
20.333	555.3250	223.62	. Q . . . V .
20.417	556.8251	217.82	. Q . . . V .
20.500	558.2772	210.85	. Q . . . V .
20.583	559.6709	202.37	. Q . . . V .
20.667	560.9299	182.80	. Q . . . V .
20.750	562.1520	177.45	. Q . . . V .
20.833	563.3491	173.82	. Q . . . V .
20.917	564.5242	170.62	. Q . . . V .
21.000	565.6736	166.89	. Q . . . V .
21.083	566.7993	163.45	. Q . . . V .
21.167	567.9031	160.28	. Q . . . V .
21.250	568.9880	157.52	. Q . . . V .
21.333	570.0547	154.90	. Q . . . V .
21.417	571.1041	152.37	. Q . . . V .
21.500	572.1368	149.94	. Q . . . V .
21.583	573.1533	147.59	. Q . . . V .
21.667	574.1555	145.53	. Q . . . V .
21.750	575.1440	143.53	. Q . . . V .
21.833	576.1193	141.61	. Q . . . V .
21.917	577.0818	139.76	. Q . . . V .
22.000	578.0320	137.96	. Q . . . V .
22.083	578.9703	136.23	. Q . . . V .
22.167	579.8969	134.55	. Q . . . V .
22.250	580.8123	132.92	. Q . . . V .
22.333	581.7168	131.33	. Q . . . V .
22.417	582.6107	129.80	. Q . . . V .
22.500	583.4944	128.31	. Q . . . V .
22.583	584.3680	126.85	. Q . . . V .
22.667	585.2325	125.53	. Q . . . V .
22.750	586.0881	124.23	. Q . . . V .
22.833	586.9351	122.98	. Q . . . V .
22.917	587.7736	121.75	. Q . . . V .
23.000	588.6039	120.56	. Q . . . V .
23.083	589.4262	119.40	. Q . . . V .
23.167	590.2408	118.27	. Q . . . V .
23.250	591.0477	117.17	. Q . . . V .

23.333	591.8473	116.10	. Q	.	.	.	V	.
23.417	592.6396	115.05	. Q	.	.	.	V	.
23.500	593.4249	114.02	. Q	.	.	.	V	.
23.583	594.2033	113.02	. Q	.	.	.	V	.
23.667	594.9750	112.05	. Q	.	.	.	V.	
23.750	595.7401	111.09	. Q	.	.	.	V.	
23.833	596.4987	110.16	. Q	.	.	.	V.	
23.917	597.2511	109.25	. Q	.	.	.	V.	
24.000	597.9973	108.35	. Q	.	.	.	V.	
24.083	598.7352	107.14	. Q	.	.	.	V.	
24.167	599.4626	105.61	. Q	.	.	.	V.	
24.250	600.1795	104.09	. Q	.	.	.	V.	
24.333	600.8845	102.36	. Q	.	.	.	V.	
24.417	601.5765	100.48	. Q	.	.	.	V.	
24.500	602.2510	97.95	.Q	.	.	.	V.	
24.583	602.9033	94.70	.Q	.	.	.	V.	
24.667	603.5298	90.98	.Q	.	.	.	V.	
24.750	604.1286	86.94	.Q	.	.	.	V.	
24.833	604.6992	82.85	.Q	.	.	.	V.	
24.917	605.2394	78.44	.Q	.	.	.	V.	
25.000	605.7501	74.15	.Q	.	.	.	V.	
25.083	606.2287	69.50	.Q	.	.	.	V.	
25.167	606.6719	64.36	.Q	.	.	.	V.	
25.250	607.0796	59.19	.Q	.	.	.	V.	
25.333	607.4460	53.20	.Q	.	.	.	V.	
25.417	607.7733	47.53	Q	.	.	.	V.	
25.500	608.0688	42.90	Q	.	.	.	V.	
25.583	608.3253	37.25	Q	.	.	.	V.	
25.667	608.5496	32.56	Q	.	.	.	V.	
25.750	608.7443	28.28	Q	.	.	.	V.	
25.833	608.9127	24.45	Q	.	.	.	V.	
25.917	609.0605	21.45	Q	.	.	.	V.	
26.000	609.1886	18.61	Q	.	.	.	V.	
26.083	609.2983	15.93	Q	.	.	.	V.	
26.167	609.3922	13.63	Q	.	.	.	V.	
26.250	609.4733	11.78	Q	.	.	.	V.	
26.333	609.5441	10.28	Q	.	.	.	V.	
26.417	609.6056	8.92	Q	.	.	.	V.	
26.500	609.6583	7.65	Q	.	.	.	V.	
26.583	609.7028	6.46	Q	.	.	.	V.	
26.667	609.7407	5.51	Q	.	.	.	V.	
26.750	609.7732	4.72	Q	.	.	.	V.	
26.833	609.8006	3.98	Q	.	.	.	V.	
26.917	609.8245	3.46	Q	.	.	.	V.	
27.000	609.8450	2.97	Q	.	.	.	V.	
27.083	609.8621	2.49	Q	.	.	.	V.	
27.167	609.8763	2.05	Q	.	.	.	V.	
27.250	609.8893	1.89	Q	.	.	.	V.	
27.333	609.9014	1.76	Q	.	.	.	V.	
27.417	609.9127	1.64	Q	.	.	.	V.	
27.500	609.9232	1.52	Q	.	.	.	V.	
27.583	609.9327	1.39	Q	.	.	.	V.	
27.667	609.9415	1.27	Q	.	.	.	V.	
27.750	609.9495	1.15	Q	.	.	.	V.	
27.833	609.9566	1.03	Q	.	.	.	V.	
27.917	609.9629	0.92	Q	.	.	.	V.	
28.000	609.9684	0.80	Q	.	.	.	V.	
28.083	609.9731	0.68	Q	.	.	.	V.	

28.167	609.9770	0.57	Q	.	.	.	V.	
28.250	609.9801	0.45	Q	.	.	.	V.	
28.333	609.9824	0.34	Q	.	.	.	V.	
28.417	609.9839	0.22	Q	.	.	.	V.	
28.500	609.9847	0.11	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%	1710.0
10%	505.0
20%	270.0
30%	190.0
40%	140.0
50%	110.0
60%	95.0
70%	75.0
80%	55.0
90%	25.0

END OF FLOODSCx ROUTING ANALYSIS

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

             F L O O D   R O U T I N G   A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
        (c) Copyright 1989-2013 Advanced Engineering Software (aes)
            Ver. 20.0  Release Date: 06/01/2013  License ID 1237

                         Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
 * RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U                                 *
 * PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
 * 10-YR EV DEC 2022 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV1033US.DAT
  TIME/DATE OF STUDY: 16:17 12/12/2022


                        ** INPUT SUMMARY **


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==============================================================================
  WATERSHED AREA =   54354.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.727 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.293; LOW LOSS FRACTION = 0.745
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.32; 30-MINUTE =  0.63;  1-HOUR =  0.87
    3-HOUR =  1.62;    6-HOUR =  2.39; 24-HOUR =  4.20
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940
==============================================================================
```



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 +----------------------------------------------------------------------------
------------------------------------+
 |                                       * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV1033US.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0      7096.3|
18.750 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                          |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                  |
 +----------------------------------------------------------------------------
------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 10-YR EV AUG 2023 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV1034CS.DAT
  TIME/DATE OF STUDY: 13:37 08/10/2023


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   66557.602 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.846 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.286; LOW LOSS FRACTION = 0.739
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.31; 30-MINUTE =  0.62;  1-HOUR =  0.86
    3-HOUR =  1.56;    6-HOUR =  2.29; 24-HOUR =  3.99
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.294; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.741;    6-HOUR = 0.887; 24-HOUR = 0.933
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV1034CS.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0      7475.4|
18.833 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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              Ver. 20.0  Release Date: 06/01/2013  License ID 1237

                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 10-YR EV OCT 2022 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV1034TS.DAT
  TIME/DATE OF STUDY: 10:47 10/25/2022


**************************************************************************
  FLOW PROCESS FROM NODE  13500.00 TO NODE    134.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3859.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.489 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284
         LOW LOSS FRACTION = 0.760
         *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 = 0.828
          30-MINUTE FACTOR = 0.828
           1-HOUR FACTOR = 0.828
           3-HOUR FACTOR = 0.974
           6-HOUR FACTOR = 0.987
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   5.597
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.320	149.280
2	0.959	298.559
3	1.599	298.559
4	2.366	357.932
5	3.336	453.075
6	4.584	582.097
7	6.500	894.625
8	9.057	1193.403
9	11.911	1332.098
10	15.115	1495.822
11	18.408	1536.896
12	21.810	1588.237
13	25.547	1744.283
14	29.058	1639.011
15	33.372	2013.783
16	37.479	1917.036
17	42.372	2283.987
18	47.656	2466.089
19	52.569	2293.323
20	56.570	1867.605
21	61.560	2329.397
22	66.023	2083.366
23	69.956	1835.759
24	73.512	1659.907
25	76.697	1486.808
26	79.208	1172.145
27	81.768	1194.912
28	84.134	1104.499
29	86.204	966.200
30	87.909	795.480
31	89.282	640.889
32	90.535	585.216
33	91.710	548.282
34	92.807	512.075
35	93.847	485.643
36	94.626	363.513
37	95.337	331.746
38	96.004	311.301
39	96.468	216.899
40	96.907	204.848
41	97.346	204.848
42	97.785	205.008
43	98.053	125.189
44	98.159	49.195
45	98.264	48.871
46	98.368	48.868
47	98.473	48.871
48	98.578	49.032

49	98.683	49.035
50	98.788	49.032
51	98.893	48.871
52	98.998	49.032
53	99.103	49.032
54	99.208	49.032
55	99.313	49.032
56	99.418	49.032
57	99.523	49.032
58	99.628	49.032
59	99.733	49.032
60	99.838	49.032
61	99.943	49.032
62	100.000	26.528

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 660.5923

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 306.2667

==========

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	0.0010	0.14	Q	.	.	.	.
0.167	0.0039	0.42	Q	.	.	.	.
0.250	0.0087	0.70	Q	.	.	.	.
0.333	0.0159	1.04	Q	.	.	.	.
0.417	0.0261	1.47	Q	.	.	.	.
0.500	0.0400	2.03	Q	.	.	.	.
0.583	0.0598	2.87	Q	.	.	.	.
0.667	0.0874	4.01	Q	.	.	.	.
0.750	0.1237	5.27	Q	.	.	.	.
0.833	0.1699	6.70	Q	.	.	.	.
0.917	0.2261	8.17	Q	.	.	.	.
1.000	0.2929	9.69	Q	.	.	.	.
1.083	0.3711	11.36	Q	.	.	.	.
1.167	0.4603	12.94	Q	.	.	.	.
1.250	0.5628	14.88	Q	.	.	.	.
1.333	0.6781	16.74	Q	.	.	.	.
1.417	0.8085	18.94	Q	.	.	.	.
1.500	0.9554	21.33	Q	.	.	.	.
1.583	1.1177	23.56	Q	.	.	.	.
1.667	1.2926	25.39	Q	.	.	.	.
1.750	1.4831	27.67	VQ	.	.	.	.
1.833	1.6879	29.73	VQ	.	.	.	.
1.917	1.9052	31.56	VQ	.	.	.	.
2.000	2.1341	33.23	VQ	.	.	.	.
2.083	2.3733	34.74	VQ	.	.	.	.
2.167	2.6210	35.96	VQ	.	.	.	.
2.250	2.8773	37.21	VQ	.	.	.	.
2.333	3.1416	38.38	VQ	.	.	.	.
2.417	3.4131	39.42	VQ	.	.	.	.
2.500	3.6907	40.31	VQ	.	.	.	.
2.583	3.9734	41.05	VQ	.	.	.	.
2.667	4.2609	41.75	VQ	.	.	.	.
2.750	4.5530	42.41	VQ	.	.	.	.
2.833	4.8495	43.04	VQ	.	.	.	.
2.917	5.1501	43.66	VQ	.	.	.	.
3.000	5.4542	44.15	VQ	.	.	.	.
3.083	5.7616	44.63	VQ	.	.	.	.
3.167	6.0720	45.08	VQ	.	.	.	.
3.250	6.3851	45.45	VQ	.	.	.	.
3.333	6.7005	45.81	VQ	.	.	.	.
3.417	7.0185	46.17	VQ	.	.	.	.
3.500	7.3390	46.53	VQ	.	.	.	.
3.583	7.6615	46.83	.Q	.	.	.	.
3.667	7.9855	47.05	.Q	.	.	.	.
3.750	8.3111	47.27	.Q	.	.	.	.
3.833	8.6382	47.50	.Q	.	.	.	.
3.917	8.9668	47.72	.Q	.	.	.	.

4.000	9.2971	47.95	.Q	.	.	.	.
4.083	9.6289	48.18	.Q	.	.	.	.
4.167	9.9624	48.42	.Q	.	.	.	.
4.250	10.2974	48.65	.Q	.	.	.	.
4.333	10.6341	48.89	.Q	.	.	.	.
4.417	10.9725	49.13	.Q	.	.	.	.
4.500	11.3125	49.37	.Q	.	.	.	.
4.583	11.6542	49.62	.Q	.	.	.	.
4.667	11.9976	49.86	.Q	.	.	.	.
4.750	12.3427	50.11	.Q	.	.	.	.
4.833	12.6896	50.36	.Q	.	.	.	.
4.917	13.0381	50.61	.Q	.	.	.	.
5.000	13.3885	50.87	.Q	.	.	.	.
5.083	13.7406	51.13	.Q	.	.	.	.
5.167	14.0943	51.37	.Q	.	.	.	.
5.250	14.4496	51.58	.Q	.	.	.	.
5.333	14.8063	51.80	.Q	.	.	.	.
5.417	15.1646	52.02	.Q	.	.	.	.
5.500	15.5245	52.25	.QV	.	.	.	.
5.583	15.8859	52.47	.QV	.	.	.	.
5.667	16.2488	52.70	.QV	.	.	.	.
5.750	16.6134	52.94	.QV	.	.	.	.
5.833	16.9796	53.17	.QV	.	.	.	.
5.917	17.3474	53.41	.QV	.	.	.	.
6.000	17.7168	53.64	.QV	.	.	.	.
6.083	18.0880	53.89	.QV	.	.	.	.
6.167	18.4608	54.13	.QV	.	.	.	.
6.250	18.8353	54.38	.QV	.	.	.	.
6.333	19.2116	54.63	.QV	.	.	.	.
6.417	19.5896	54.89	.QV	.	.	.	.
6.500	19.9694	55.15	. Q	.	.	.	.
6.583	20.3510	55.41	. Q	.	.	.	.
6.667	20.7344	55.67	. Q	.	.	.	.
6.750	21.1197	55.94	. Q	.	.	.	.
6.833	21.5068	56.21	. Q	.	.	.	.
6.917	21.8958	56.49	. Q	.	.	.	.
7.000	22.2867	56.76	. Q	.	.	.	.
7.083	22.6796	57.05	. Q	.	.	.	.
7.167	23.0744	57.33	. QV	.	.	.	.
7.250	23.4713	57.62	. QV	.	.	.	.
7.333	23.8701	57.91	. QV	.	.	.	.
7.417	24.2710	58.21	. QV	.	.	.	.
7.500	24.6739	58.51	. QV	.	.	.	.
7.583	25.0790	58.81	. QV	.	.	.	.
7.667	25.4862	59.12	. QV	.	.	.	.
7.750	25.8955	59.44	. QV	.	.	.	.
7.833	26.3070	59.75	. QV	.	.	.	.
7.917	26.7208	60.08	. QV	.	.	.	.
8.000	27.1368	60.40	. QV	.	.	.	.
8.083	27.5550	60.73	. QV	.	.	.	.
8.167	27.9756	61.07	. QV	.	.	.	.
8.250	28.3986	61.41	. QV	.	.	.	.
8.333	28.8239	61.76	. QV	.	.	.	.
8.417	29.2516	62.11	. QV	.	.	.	.
8.500	29.6818	62.46	. QV	.	.	.	.
8.583	30.1145	62.83	. QV	.	.	.	.
8.667	30.5498	63.19	. QV	.	.	.	.
8.750	30.9876	63.57	. Q V	.	.	.	.

8.833	31.4280	63.95	. Q V	.	.	.	.
8.917	31.8710	64.33	. Q V	.	.	.	.
9.000	32.3168	64.72	. Q V	.	.	.	.
9.083	32.7653	65.12	. Q V	.	.	.	.
9.167	33.2165	65.52	. Q V	.	.	.	.
9.250	33.6707	65.94	. Q V	.	.	.	.
9.333	34.1276	66.35	. Q V	.	.	.	.
9.417	34.5875	66.78	. Q V	.	.	.	.
9.500	35.0504	67.21	. Q V	.	.	.	.
9.583	35.5163	67.65	. Q V	.	.	.	.
9.667	35.9853	68.09	. Q V	.	.	.	.
9.750	36.4574	68.55	. Q V	.	.	.	.
9.833	36.9327	69.01	. Q V	.	.	.	.
9.917	37.4112	69.48	. Q V	.	.	.	.
10.000	37.8930	69.96	. Q V	.	.	.	.
10.083	38.3782	70.45	. Q V	.	.	.	.
10.167	38.8668	70.95	. Q V	.	.	.	.
10.250	39.3590	71.46	. Q V	.	.	.	.
10.333	39.8546	71.97	. Q V	.	.	.	.
10.417	40.3539	72.50	. Q V	.	.	.	.
10.500	40.8569	73.03	. Q V	.	.	.	.
10.583	41.3636	73.58	. Q V	.	.	.	.
10.667	41.8742	74.13	. Q V	.	.	.	.
10.750	42.3887	74.71	. Q V	.	.	.	.
10.833	42.9072	75.28	. Q V	.	.	.	.
10.917	43.4298	75.88	. Q V	.	.	.	.
11.000	43.9565	76.48	. Q V	.	.	.	.
11.083	44.4875	77.10	. Q V	.	.	.	.
11.167	45.0229	77.73	. Q V	.	.	.	.
11.250	45.5627	78.38	. Q V	.	.	.	.
11.333	46.1070	79.04	. Q V	.	.	.	.
11.417	46.6560	79.71	. Q V	.	.	.	.
11.500	47.2097	80.40	. Q V	.	.	.	.
11.583	47.7683	81.11	. Q V	.	.	.	.
11.667	48.3319	81.83	. Q V	.	.	.	.
11.750	48.9005	82.57	. Q V	.	.	.	.
11.833	49.4744	83.32	. Q V	.	.	.	.
11.917	50.0536	84.10	. Q V	.	.	.	.
12.000	50.6383	84.89	. Q V	.	.	.	.
12.083	51.2293	85.81	. Q V	.	.	.	.
12.167	51.8273	86.84	. Q V	.	.	.	.
12.250	52.4327	87.90	. Q V	.	.	.	.
12.333	53.0457	89.01	. Q V	.	.	.	.
12.417	53.6671	90.22	. Q V	.	.	.	.
12.500	54.2975	91.53	. Q V	.	.	.	.
12.583	54.9386	93.08	. Q V	.	.	.	.
12.667	55.5918	94.85	. Q V	.	.	.	.
12.750	56.2581	96.75	. Q V	.	.	.	.
12.833	56.9384	98.78	. Q V	.	.	.	.
12.917	57.6332	100.88	. Q V	.	.	.	.
13.000	58.3428	103.04	. Q V	.	.	.	.
13.083	59.0684	105.35	. Q V	.	.	.	.
13.167	59.8095	107.62	. Q V	.	.	.	.
13.250	60.5684	110.19	. Q V	.	.	.	.
13.333	61.3448	112.73	. Q V	.	.	.	.
13.417	62.1407	115.57	. Q V	.	.	.	.
13.500	62.9572	118.56	. Q V	.	.	.	.
13.583	63.7941	121.51	. Q V	.	.	.	.

13.667	64.6496	124.22	. Q V . . . .
13.750	65.5263	127.30	. Q V . . . .
13.833	66.4235	130.27	. Q V . . . .
13.917	67.3406	133.16	. Q V . . . .
14.000	68.2772	135.99	. Q V . . . .
14.083	69.2342	138.96	. Q V. . . . .
14.167	70.2118	141.96	. Q V. . . . .
14.250	71.2109	145.07	. Q V. . . . .
14.333	72.2320	148.25	. Q V. . . . .
14.417	73.2758	151.57	. Q V. . . . .
14.500	74.3433	155.00	. Q V. . . . .
14.583	75.4371	158.81	. Q V. . . . .
14.667	76.5598	163.02	. Q V. . . . .
14.750	77.7134	167.51	. Q V . . . .
14.833	78.8997	172.25	. Q V . . . .
14.917	80.1202	177.21	. Q V . . . .
15.000	81.3754	182.25	. Q V . . . .
15.083	82.6678	187.67	. Q V . . . .
15.167	83.9976	193.09	. Q V . . . .
15.250	85.3690	199.13	. Q .V . . . .
15.333	86.7830	205.32	. Q .V . . . .
15.417	88.2419	211.82	. Q .V . . . .
15.500	89.7452	218.28	. Q .V . . . .
15.583	91.2943	224.94	. Q .V . . . .
15.667	92.8871	231.28	. Q . V . . . .
15.750	94.5371	239.58	. Q . V . . . .
15.833	96.2559	249.56	. Q. V . . . .
15.917	98.0603	261.99	. Q. V . . . .
16.000	99.9861	279.64	. Q V . . . .
16.083	102.2002	321.48	. .Q V . . . .
16.167	104.6851	360.81	. . Q . . . .
16.250	107.2954	379.01	. . QV . . . .
16.333	110.1196	410.08	. . Q . . . .
16.417	113.2478	454.21	. . V Q . . . .
16.500	116.7786	512.67	. . V Q . . . .
16.583	120.8959	597.84	. . V .Q . . . .
16.667	125.5490	675.63	. . V . Q . . . .
16.750	130.5166	721.30	. . V . Q . . . .
16.833	135.7562	760.78	. . V . Q . . . .
16.917	141.1480	782.89	. . V . Q . . . .
17.000	146.6966	805.66	. . V. Q. . . .
17.083	152.5096	844.05	. . V. Q . . .
17.167	158.3651	850.22	. . V Q . . .
17.250	164.7322	924.50	. . .V . Q . .
17.333	171.1456	931.22	. . . V . Q . .
17.417	178.0260	999.03	. . . V . Q .
17.500	185.0560	1020.77	. . . V . Q .
17.583	191.7929	978.19	. . . V . Q .
17.667	198.0139	903.29	. . . V . Q .
17.750	204.5797	953.36	. . . V . Q .
17.833	210.7119	890.39	. . . V . Q .
17.917	216.3439	817.78	. . . VQ. . .
18.000	221.5442	755.07	. . . QV . . .
18.083	226.3447	697.04	. . . Q V. . .
18.167	230.6412	623.85	. . . Q V . .
18.250	234.7860	601.82	. . .Q V . .
18.333	238.6652	563.26	. . Q .V . .
18.417	242.2030	513.69	. . Q . .V . .

18.500	245.3708	459.97	. . Q . . V .
18.583	248.2297	415.11	. . Q . . V .
18.667	250.9109	389.31	. . Q . . V .
18.750	253.4454	368.02	. . Q . . V .
18.833	255.8301	346.26	. . Q . . V .
18.917	258.0633	324.25	. .Q . . V .
19.000	260.0611	290.08	. Q . . V .
19.083	261.9247	270.59	. Q. . . V .
19.167	263.6761	254.31	. Q. . . V .
19.250	265.2491	228.41	. Q . . . V .
19.333	266.7363	215.93	. Q . . . V .
19.417	268.1537	205.81	. Q . . . V .
19.500	269.4864	193.51	. Q . . . V .
19.583	270.6511	169.12	. Q . . . V .
19.667	271.6727	148.33	. Q . . . V .
19.750	272.6472	141.50	. Q . . . V .
19.833	273.5884	136.66	. Q . . . V .
19.917	274.4977	132.04	. Q . . . V .
20.000	275.3774	127.73	. Q . . . V .
20.083	276.2303	123.85	. Q . . . V .
20.167	277.0592	120.35	. Q . . . V .
20.250	277.8655	117.07	. Q . . . V .
20.333	278.6508	114.04	. Q . . . V .
20.417	279.4164	111.16	. Q . . . V .
20.500	280.1639	108.54	. Q . . . V .
20.583	280.8959	106.28	. Q . . . V .
20.667	281.6135	104.20	. Q . . . V .
20.750	282.3173	102.19	. Q . . . V .
20.833	283.0066	100.08	. Q . . . V .
20.917	283.6796	97.72	. Q . . . V .
21.000	284.3339	95.01	. Q . . . V .
21.083	284.9639	91.48	. Q . . . V .
21.167	285.5454	84.44	. Q . . . V .
21.250	286.0802	77.65	. Q . . . V .
21.333	286.6017	75.72	. Q . . . V .
21.417	287.1138	74.36	. Q . . . V .
21.500	287.6167	73.01	. Q . . . V .
21.583	288.1105	71.71	. Q . . . V .
21.667	288.5964	70.55	. Q . . . V .
21.750	289.0746	69.44	. Q . . . V .
21.833	289.5456	68.38	. Q . . . V .
21.917	290.0095	67.36	. Q . . . V .
22.000	290.4666	66.38	. Q . . . V .
22.083	290.9172	65.43	. Q . . . V .
22.167	291.3616	64.54	. Q . . . V .
22.250	291.8004	63.71	. Q . . . V .
22.333	292.2336	62.90	. Q . . . V .
22.417	292.6615	62.13	. Q . . . V .
22.500	293.0842	61.38	. Q . . . V .
22.583	293.5019	60.65	. Q . . . V .
22.667	293.9147	59.94	. Q . . . V .
22.750	294.3228	59.26	. Q . . . V .
22.833	294.7264	58.59	. Q . . . V .
22.917	295.1255	57.95	. Q . . . V .
23.000	295.5202	57.32	. Q . . . V .
23.083	295.9107	56.71	. Q . . . V .
23.167	296.2973	56.12	. Q . . . V .
23.250	296.6800	55.57	. Q . . . V .

23.333	297.0591	55.04	. Q	.	.	.	V	.
23.417	297.4346	54.52	.Q	.	.	.	V	.
23.500	297.8065	54.01	.Q	.	.	.	V	.
23.583	298.1751	53.52	.Q	.	.	.	V	.
23.667	298.5403	53.03	.Q	.	.	.	V	.
23.750	298.9023	52.56	.Q	.	.	.		V.
23.833	299.2612	52.10	.Q	.	.	.		V.
23.917	299.6169	51.65	.Q	.	.	.		V.
24.000	299.9696	51.21	.Q	.	.	.		V.
24.083	300.3184	50.64	.Q	.	.	.		V.
24.167	300.6623	49.94	.Q	.	.	.		V.
24.250	301.0015	49.25	.Q	.	.	.		V.
24.333	301.3357	48.52	.Q	.	.	.		V.
24.417	301.6642	47.71	.Q	.	.	.		V.
24.500	301.9865	46.78	.Q	.	.	.		V.
24.583	302.3004	45.58	.Q	.	.	.		V.
24.667	302.6041	44.11	.Q	.	.	.		V.
24.750	302.8969	42.52	.Q	.	.	.		V.
24.833	303.1779	40.79	.Q	.	.	.		V.
24.917	303.4467	39.04	.Q	.	.	.		V.
25.000	303.7033	37.25	.Q	.	.	.		V.
25.083	303.9467	35.34	.Q	.	.	.		V.
25.167	304.1776	33.54	.Q	.	.	.		V.
25.250	304.3939	31.40	.Q	.	.	.		V.
25.333	304.5961	29.37	.Q	.	.	.		V.
25.417	304.7821	27.01	Q	.	.	.		V.
25.500	304.9508	24.50	Q	.	.	.		V.
25.583	305.1035	22.17	Q	.	.	.		V.
25.667	305.2430	20.25	Q	.	.	.		V.
25.750	305.3664	17.92	Q	.	.	.		V.
25.833	305.4754	15.83	Q	.	.	.		V.
25.917	305.5718	13.99	Q	.	.	.		V.
26.000	305.6567	12.34	Q	.	.	.		V.
26.083	305.7315	10.85	Q	.	.	.		V.
26.167	305.7981	9.67	Q	.	.	.		V.
26.250	305.8565	8.48	Q	.	.	.		V.
26.333	305.9073	7.38	Q	.	.	.		V.
26.417	305.9516	6.42	Q	.	.	.		V.
26.500	305.9903	5.63	Q	.	.	.		V.
26.583	306.0247	4.99	Q	.	.	.		V.
26.667	306.0550	4.40	Q	.	.	.		V.
26.750	306.0815	3.85	Q	.	.	.		V.
26.833	306.1046	3.35	Q	.	.	.		V.
26.917	306.1243	2.87	Q	.	.	.		V.
27.000	306.1415	2.50	Q	.	.	.		V.
27.083	306.1565	2.17	Q	.	.	.		V.
27.167	306.1694	1.87	Q	.	.	.		V.
27.250	306.1807	1.65	Q	.	.	.		V.
27.333	306.1907	1.44	Q	.	.	.		V.
27.417	306.1992	1.24	Q	.	.	.		V.
27.500	306.2064	1.04	Q	.	.	.		V.
27.583	306.2127	0.91	Q	.	.	.		V.
27.667	306.2186	0.86	Q	.	.	.		V.
27.750	306.2242	0.81	Q	.	.	.		V.
27.833	306.2294	0.76	Q	.	.	.		V.
27.917	306.2343	0.71	Q	.	.	.		V.
28.000	306.2388	0.66	Q	.	.	.		V.
28.083	306.2430	0.61	Q	.	.	.		V.

28.167	306.2468	0.55	Q	.	.	.		V.
28.250	306.2503	0.51	Q	.	.	.		V.
28.333	306.2534	0.46	Q	.	.	.		V.
28.417	306.2562	0.41	Q	.	.	.		V.
28.500	306.2587	0.36	Q	.	.	.		V.
28.583	306.2608	0.31	Q	.	.	.		V.
28.667	306.2626	0.26	Q	.	.	.		V.
28.750	306.2641	0.21	Q	.	.	.		V.
28.833	306.2652	0.17	Q	.	.	.		V.
28.917	306.2661	0.12	Q	.	.	.		V.
29.000	306.2665	0.07	Q	.	.	.		V.
29.083	306.2667	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%	1745.0
10%	470.0
20%	250.0
30%	175.0
40%	140.0
50%	120.0
60%	95.0
70%	80.0
80%	55.0
90%	30.0

END OF FLOODSCx ROUTING ANALYSIS

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            Ver. 17.0  Release Date: 07/01/2010  License ID 1527

                         Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U                                 *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
* 10-YR EV AUG 2023 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV1034US.DAT
  TIME/DATE OF STUDY: 13:37 08/10/2023


                        ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   62698.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.846 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.286; LOW LOSS FRACTION = 0.738
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.31; 30-MINUTE =  0.62;  1-HOUR =  0.86
    3-HOUR =  1.58;    6-HOUR =  2.31; 24-HOUR =  4.05
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936
============================================================================
```



```
 +--------------------------------------------------------------------------------
------------------------------------+
 |                                       * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV1034US.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0      7382.9|
18.833 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                               |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                       |
 +--------------------------------------------------------------------------------
------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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

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


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJO - SINGLE AREA UH                                 *
* PHASE CONDITION NO PA4&5 - REGIONAL NODE 119                          *
* 2-YR EV JANUARY 2019 ROKAMOTO                                         *
 ************************************************************************

  FILE NAME: EV02119S.DAT
  TIME/DATE OF STUDY: 12:04 01/02/2019


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    119.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   49511.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    5.382 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.595
         LOW LOSS FRACTION = 0.931
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.16
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.30
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.41
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  0.78
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.15
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  2.04

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.345
          30-MINUTE FACTOR = 0.395
           1-HOUR FACTOR = 0.435
           3-HOUR FACTOR = 0.785
           6-HOUR FACTOR = 0.904
          24-HOUR FACTOR = 0.944

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   1.548
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.088	529.793
2	0.265	1059.587
3	0.442	1059.587
4	0.619	1059.594
5	0.796	1059.583
6	0.973	1059.590
7	1.150	1059.579
8	1.327	1059.598
9	1.504	1059.583
10	1.681	1059.586
11	1.858	1059.587
12	2.057	1194.185
13	2.323	1587.159
14	2.592	1612.408
15	2.861	1612.422
16	3.130	1612.409
17	3.400	1612.422
18	3.669	1612.408
19	3.947	1662.035
20	4.382	2606.553
21	4.877	2966.889
22	5.373	2966.801
23	5.873	2992.558
24	6.479	3628.938
25	7.131	3903.736
26	7.785	3918.167
27	8.550	4583.045
28	9.376	4944.736
29	10.188	4859.062
30	10.963	4645.800
31	11.738	4635.709
32	12.512	4635.646
33	13.286	4635.709
34	14.138	5099.934
35	15.335	7169.239
36	16.382	6270.130
37	17.208	4946.443
38	18.034	4944.799
39	18.860	4944.799
40	19.687	4953.524
41	20.639	5701.524
42	21.675	6201.804
43	22.845	7002.888
44	24.026	7076.302
45	24.944	5496.291
46	25.829	5298.024
47	26.714	5297.784
48	27.599	5300.388

49	28.677	6453.406
50	29.896	7301.716
51	30.962	6380.712
52	32.057	6558.433
53	33.533	8837.825
54	34.870	8006.750
55	36.038	6989.925
56	36.898	5154.498
57	37.739	5034.144
58	39.269	9158.592
59	40.806	9207.702
60	42.135	7953.392
61	43.579	8646.891
62	44.957	8249.854
63	46.364	8425.942
64	47.983	9698.160
65	49.773	10718.800
66	51.031	7532.303
67	52.158	6743.508
68	53.284	6742.549
69	54.375	6533.410
70	55.408	6185.529
71	56.529	6710.913
72	57.774	7454.893
73	59.117	8045.946
74	60.638	9108.066
75	62.281	9837.906
76	63.600	7898.640
77	64.750	6884.648
78	65.822	6416.346
79	66.848	6142.564
80	67.876	6160.472
81	69.093	7285.932
82	70.249	6923.342
83	71.161	5456.169
84	72.081	5509.025
85	73.080	5982.032
86	74.079	5981.119
87	75.036	5734.702
88	75.958	5516.562
89	76.680	4327.009
90	77.369	4122.072
91	78.057	4120.245
92	78.745	4120.199
93	79.433	4120.199
94	80.131	4176.847
95	80.857	4348.708
96	81.586	4363.784
97	82.281	4163.644
98	82.933	3904.938
99	83.585	3904.984
100	84.214	3763.319
101	84.804	3536.729
102	85.394	3531.064
103	85.971	3455.549
104	86.463	2947.594
105	86.940	2853.166
106	87.416	2853.212

107	87.888	2826.715
108	88.282	2358.459
109	88.647	2180.978
110	89.011	2180.933
111	89.375	2182.851
112	89.739	2179.060
113	90.092	2113.001
114	90.419	1956.215
115	90.745	1952.469
116	91.071	1952.515
117	91.397	1950.550
118	91.723	1952.469
119	92.042	1912.816
120	92.339	1776.907
121	92.634	1765.532
122	92.929	1767.405
123	93.224	1763.659
124	93.519	1767.405
125	93.814	1767.451
126	94.071	1540.815
127	94.269	1185.854
128	94.465	1174.478
129	94.662	1178.270
130	94.859	1178.316
131	95.055	1174.478
132	95.253	1182.062
133	95.449	1174.524
134	95.645	1174.478
135	95.842	1182.062
136	96.020	1065.021
137	96.146	751.494
138	96.267	725.135
139	96.388	725.089
140	96.510	728.881
141	96.631	728.835
142	96.752	725.135
143	96.873	725.089
144	96.995	728.881
145	97.116	725.089
146	97.239	732.627
147	97.360	725.089
148	97.481	725.135
149	97.603	728.835
150	97.724	725.135
151	97.845	728.835
152	97.965	717.552
153	98.021	336.140
154	98.050	173.689
155	98.079	169.943
156	98.108	173.735
157	98.137	177.481
158	98.166	173.735
159	98.195	173.735
160	98.224	173.735
161	98.253	173.689
162	98.282	169.943
163	98.311	177.526
164	98.340	173.689

165	98.370	173.735
166	98.399	177.481
167	98.428	169.943
168	98.457	173.735
169	98.486	173.735
170	98.515	173.735
171	98.544	173.689
172	98.573	177.526
173	98.602	169.943
174	98.631	173.689
175	98.660	177.526
176	98.689	169.943
177	98.718	173.735
178	98.747	173.689
179	98.776	173.735
180	98.805	173.735
181	98.834	173.689
182	98.864	181.272
183	98.892	166.197
184	98.922	181.272
185	98.950	166.151
186	98.979	173.735
187	99.008	173.735
188	99.037	173.735
189	99.066	173.735
190	99.095	173.735
191	99.124	173.735
192	99.153	173.735
193	99.182	173.735
194	99.211	173.735
195	99.240	173.735
196	99.269	173.735
197	99.298	173.735
198	99.327	173.735
199	99.356	173.735
200	99.385	173.735
201	99.414	173.735
202	99.443	173.735
203	99.472	173.735
204	99.501	173.735
205	99.530	173.735
206	99.559	173.735
207	99.588	173.735
208	99.617	173.735
209	99.646	173.735
210	99.675	173.735
211	99.704	173.735
212	99.733	173.735
213	99.762	173.735
214	99.791	173.735
215	99.820	173.735
216	99.849	173.735
217	99.878	173.735
218	99.907	173.735
219	99.936	173.735
220	99.965	173.735
221	99.994	173.735
222	100.000	34.263

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 7373.9717
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 549.7418

---

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. 150.0 300.0 450.0 600.0
0.083	0.0007	0.11	Q . . . .
0.167	0.0030	0.32	Q . . . .
0.250	0.0067	0.54	Q . . . .
0.333	0.0119	0.76	Q . . . .
0.417	0.0186	0.98	Q . . . .
0.500	0.0269	1.19	Q . . . .
0.583	0.0366	1.41	Q . . . .
0.667	0.0479	1.63	Q . . . .
0.750	0.0606	1.85	Q . . . .
0.833	0.0749	2.08	Q . . . .
0.917	0.0907	2.30	Q . . . .
1.000	0.1083	2.55	Q . . . .
1.083	0.1281	2.88	Q . . . .
1.167	0.1503	3.22	Q . . . .
1.250	0.1747	3.55	Q . . . .
1.333	0.2015	3.89	Q . . . .
1.417	0.2307	4.23	Q . . . .
1.500	0.2622	4.57	Q . . . .
1.583	0.2961	4.93	Q . . . .
1.667	0.3338	5.47	Q . . . .
1.750	0.3757	6.09	Q . . . .
1.833	0.4220	6.71	Q . . . .
1.917	0.4726	7.34	Q . . . .
2.000	0.5284	8.11	Q . . . .
2.083	0.5899	8.93	Q . . . .
2.167	0.6570	9.75	Q . . . .
2.250	0.7308	10.71	Q . . . .
2.333	0.8117	11.75	Q . . . .
2.417	0.8997	12.78	Q . . . .
2.500	0.9945	13.76	Q . . . .
2.583	1.0961	14.75	Q . . . .
2.667	1.2045	15.74	VQ . . . .
2.750	1.3198	16.73	VQ . . . .
2.833	1.4425	17.82	VQ . . . .
2.917	1.5757	19.34	VQ . . . .
3.000	1.7181	20.67	VQ . . . .
3.083	1.8678	21.75	VQ . . . .
3.167	2.0250	22.82	VQ . . . .
3.250	2.1896	23.90	VQ . . . .
3.333	2.3616	24.98	VQ . . . .
3.417	2.5422	26.22	VQ . . . .
3.500	2.7321	27.57	VQ . . . .
3.583	2.9323	29.08	VQ . . . .
3.667	3.1432	30.61	V Q . . . .
3.750	3.3624	31.83	V Q . . . .
3.833	3.5897	33.01	V Q . . . .
3.917	3.8252	34.19	V Q . . . .

4.000	4.0688	35.38	V Q . . . .
4.083	4.3223	36.81	V Q . . . .
4.167	4.5869	38.41	V Q . . . .
4.250	4.8612	39.84	V Q . . . .
4.333	5.1457	41.30	V Q . . . .
4.417	5.4434	43.23	V Q . . . .
4.500	5.7533	45.00	V Q . . . .
4.583	6.0741	46.57	V Q . . . .
4.667	6.4031	47.77	V Q . . . .
4.750	6.7403	48.95	V Q . . . .
4.833	7.0914	50.98	V Q . . . .
4.917	7.4565	53.02	V Q . . . .
5.000	7.8340	54.82	V Q . . . .
5.083	8.2249	56.76	V Q . . . .
5.167	8.6287	58.63	V Q . . . .
5.250	9.0456	60.54	V Q . . . .
5.333	9.4775	62.71	V Q . . . .
5.417	9.9259	65.10	V Q . . . .
5.500	10.3863	66.85	V Q . . . .
5.583	10.8577	68.45	V Q . . . .
5.667	11.3402	70.05	V Q . . . .
5.750	11.8334	71.62	V Q . . . .
5.833	12.3370	73.12	V Q . . . .
5.917	12.8517	74.74	V Q . . . .
6.000	13.3786	76.51	V Q . . . .
6.083	13.9186	78.41	.V Q . . . .
6.167	14.4732	80.53	.V Q . . . .
6.250	15.0436	82.81	.V Q . . . .
6.333	15.6269	84.70	.V Q . . . .
6.417	16.2220	86.40	.V Q . . . .
6.500	16.8281	88.01	.V Q . . . .
6.583	17.4449	89.56	.V Q . . . .
6.667	18.0725	91.13	.V Q . . . .
6.750	18.7126	92.94	.V Q . . . .
6.833	19.3646	94.67	.V Q . . . .
6.917	20.0266	96.12	.V Q . . . .
7.000	20.6986	97.58	.V Q . . . .
7.083	21.3815	99.15	.V Q . . . .
7.167	22.0751	100.72	.V Q . . . .
7.250	22.7794	102.25	.V Q . . . .
7.333	23.4939	103.75	.V Q . . . .
7.417	24.2170	105.01	.V Q . . . .
7.500	24.9486	106.23	.V Q . . . .
7.583	25.6887	107.46	.V Q . . . .
7.667	26.4373	108.69	.V Q . . . .
7.750	27.1944	109.94	.V Q . . . .
7.833	27.9602	111.20	. V Q . . . .
7.917	28.7350	112.50	. V Q . . . .
8.000	29.5188	113.81	. V Q . . . .
8.083	30.3115	115.09	. V Q . . . .
8.167	31.1126	116.32	. V Q . . . .
8.250	31.9223	117.57	. V Q . . . .
8.333	32.7404	118.78	. V Q . . . .
8.417	33.5666	119.97	. V Q . . . .
8.500	34.4009	121.15	. V Q . . . .
8.583	35.2434	122.33	. V Q . . . .
8.667	36.0934	123.41	. V Q . . . .
8.750	36.9507	124.48	. V Q . . . .

8.833	37.8155	125.56	. V	Q .	.	.	.
8.917	38.6877	126.64	. V	Q .	.	.	.
9.000	39.5667	127.63	. V	Q .	.	.	.
9.083	40.4524	128.60	. V	Q .	.	.	.
9.167	41.3447	129.57	. V	Q .	.	.	.
9.250	42.2438	130.55	. V	Q .	.	.	.
9.333	43.1497	131.53	. V	Q .	.	.	.
9.417	44.0623	132.52	. V	Q .	.	.	.
9.500	44.9816	133.47	. V	Q .	.	.	.
9.583	45.9074	134.44	. V	Q .	.	.	.
9.667	46.8400	135.41	. V	Q.	.	.	.
9.750	47.7793	136.39	. V	Q.	.	.	.
9.833	48.7254	137.38	. V	Q.	.	.	.
9.917	49.6784	138.37	. V	Q.	.	.	.
10.000	50.6380	139.34	. V	Q.	.	.	.
10.083	51.6043	140.32	. V	Q.	.	.	.
10.167	52.5775	141.30	. V	Q.	.	.	.
10.250	53.5575	142.30	. V	Q.	.	.	.
10.333	54.5444	143.30	. V	Q.	.	.	.
10.417	55.5384	144.32	. V	Q.	.	.	.
10.500	56.5390	145.30	. V	Q.	.	.	.
10.583	57.5460	146.22	. V	Q.	.	.	.
10.667	58.5594	147.14	. V	Q.	.	.	.
10.750	59.5792	148.08	. V	Q.	.	.	.
10.833	60.6055	149.02	. V	Q.	.	.	.
10.917	61.6384	149.98	. V	Q.	.	.	.
11.000	62.6780	150.95	. V	Q	.	.	.
11.083	63.7243	151.93	. V	Q	.	.	.
11.167	64.7775	152.92	. V	Q	.	.	.
11.250	65.8375	153.92	. V	Q	.	.	.
11.333	66.9044	154.91	. V	Q	.	.	.
11.417	67.9778	155.85	. V	Q	.	.	.
11.500	69.0576	156.80	. V	Q	.	.	.
11.583	70.1441	157.76	. V	Q	.	.	.
11.667	71.2374	158.73	. V	Q	.	.	.
11.750	72.3374	159.72	. V	Q	.	.	.
11.833	73.4443	160.72	. V	Q	.	.	.
11.917	74.5582	161.74	. V	Q	.	.	.
12.000	75.6792	162.77	. V	Q	.	.	.
12.083	76.8087	163.99	. V	Q	.	.	.
12.167	77.9478	165.40	. V	.Q	.	.	.
12.250	79.0967	166.82	. V	.Q	.	.	.
12.333	80.2555	168.26	. V	.Q	.	.	.
12.417	81.4243	169.71	. V	.Q	.	.	.
12.500	82.6033	171.18	. V	.Q	.	.	.
12.583	83.7924	172.67	. V	.Q	.	.	.
12.667	84.9919	174.17	. V	.Q	.	.	.
12.750	86.2013	175.61	. V	.Q	.	.	.
12.833	87.4205	177.03	. V	.Q	.	.	.
12.917	88.6497	178.47	. V	.Q	.	.	.
13.000	89.8892	179.97	. V	.Q	.	.	.
13.083	91.1401	181.63	. V	. Q	.	.	.
13.167	92.4025	183.31	. V	. Q	.	.	.
13.250	93.6766	185.01	. V	. Q	.	.	.
13.333	94.9626	186.72	. V	. Q	.	.	.
13.417	96.2606	188.47	. V	. Q	.	.	.
13.500	97.5707	190.23	. V	. Q	.	.	.
13.583	98.8932	192.03	. V	. Q	.	.	.

13.667	100.2304	194.16	.	V . Q	.	.	.
13.750	101.5833	196.44	.	V . Q	.	.	.
13.833	102.9520	198.74	.	V . Q	.	.	.
13.917	104.3368	201.07	.	V . Q	.	.	.
14.000	105.7392	203.63	.	V . Q	.	.	.
14.083	107.1614	206.52	.	V . Q	.	.	.
14.167	108.6052	209.63	.	V . Q	.	.	.
14.250	110.0719	212.97	.	V . Q	.	.	.
14.333	111.5626	216.44	.	V . Q	.	.	.
14.417	113.0770	219.90	.	V . Q	.	.	.
14.500	114.6148	223.29	.	V . Q	.	.	.
14.583	116.1761	226.69	.	V . Q	.	.	.
14.667	117.7608	230.10	.	V . Q	.	.	.
14.750	119.3691	233.53	.	V . Q	.	.	.
14.833	121.0022	237.12	.	V . Q	.	.	.
14.917	122.6647	241.40	.	V . Q	.	.	.
15.000	124.3550	245.44	.	V. Q	.	.	.
15.083	126.0714	249.21	.	V. Q	.	.	.
15.167	127.8138	253.00	.	V. Q	.	.	.
15.250	129.5824	256.79	.	V. Q	.	.	.
15.333	131.3770	260.59	.	V. Q	.	.	.
15.417	133.1978	264.38	.	V. Q	.	.	.
15.500	135.0442	268.09	.	V. Q	.	.	.
15.583	136.9185	272.15	.	V. Q	.	.	.
15.667	138.8238	276.65	.	V Q	.	.	.
15.750	140.7572	280.73	.	V Q	.	.	.
15.833	142.7179	284.70	.	V Q	.	.	.
15.917	144.7074	288.86	.	V Q.	.	.	.
16.000	146.7294	293.60	.	V Q.	.	.	.
16.083	148.8004	300.71	.	V Q	.	.	.
16.167	150.9203	307.81	.	V Q	.	.	.
16.250	153.0752	312.89	.	.V Q	.	.	.
16.333	155.2655	318.03	.	.V .Q	.	.	.
16.417	157.4959	323.85	.	.V .Q	.	.	.
16.500	159.7654	329.53	.	.V .Q	.	.	.
16.583	162.0720	334.92	.	.V . Q	.	.	.
16.667	164.4115	339.69	.	.V . Q	.	.	.
16.750	166.7832	344.37	.	. V . Q	.	.	.
16.833	169.1980	350.63	.	. V . Q	.	.	.
16.917	171.6624	357.83	.	. V . Q	.	.	.
17.000	174.1716	364.33	.	. V . Q	.	.	.
17.083	176.7261	370.92	.	. V . Q	.	.	.
17.167	179.3143	375.81	.	. V . Q	.	.	.
17.250	181.9360	380.67	.	. V . Q	.	.	.
17.333	184.5907	385.47	.	. V . Q	.	.	.
17.417	187.2832	390.95	.	. V . Q	.	.	.
17.500	190.0099	395.91	.	. V . Q	.	.	.
17.583	192.7728	401.18	.	. V . Q	.	.	.
17.667	195.5908	409.17	.	. V . Q	.	.	.
17.750	198.4434	414.19	.	. V . Q	.	.	.
17.833	201.3223	418.01	.	. V . Q	.	.	.
17.917	204.2301	422.21	.	. V . Q	.	.	.
18.000	207.1846	429.00	.	. V . Q	.	.	.
18.083	210.1805	435.00	.	. V . Q.	.	.	.
18.167	213.2152	440.64	.	. V . Q.	.	.	.
18.250	216.2955	447.25	.	. V . Q.	.	.	.
18.333	219.4130	452.66	.	. V . Q	.	.	.
18.417	222.5661	457.84	.	. V . Q	.	.	.

18.500	225.7477	461.97	. . V . Q .
18.583	228.9584	466.18	. . V . .Q .
18.667	232.1945	469.89	. . V . .Q .
18.750	235.4608	474.27	. . V . .Q .
18.833	238.7780	481.65	. . V . . Q .
18.917	242.1695	492.44	. . V . . Q .
19.000	245.5536	491.37	. . V . . Q .
19.083	248.9299	490.25	. . V . . Q .
19.167	252.3311	493.84	. . V . . Q .
19.250	255.7617	498.12	. . V . . Q .
19.333	259.2243	502.77	. . V . . Q .
19.417	262.7313	509.22	. . V. . Q .
19.500	266.2640	512.94	. . V. . Q .
19.583	269.8253	517.10	. . V. . Q .
19.667	273.3890	517.45	. . V. . Q .
19.750	276.9088	511.08	. . V . Q .
19.833	280.4224	510.18	. . V . Q .
19.917	283.9410	510.89	. . V . Q .
20.000	287.4783	513.63	. . V . Q .
20.083	291.0562	519.50	. . .V . Q .
20.167	294.6498	521.80	. . .V . Q .
20.250	298.2224	518.75	. . .V . Q .
20.333	301.8052	520.22	. . .V . Q .
20.417	305.4351	527.06	. . . V . Q
20.500	309.0266	521.48	. . . V . Q .
20.583	312.5693	514.40	. . . V . Q .
20.667	316.0504	505.46	. . . V . Q .
20.750	319.5338	505.79	. . . V . Q .
20.833	323.1211	520.87	. . . V . Q .
20.917	326.6975	519.31	. . . V . Q .
21.000	330.2286	512.71	. . . V . Q .
21.083	333.7570	512.33	. . . V . Q .
21.167	337.2735	510.59	. . . V . Q .
21.250	340.7972	511.64	. . . V . Q .
21.333	344.3397	514.37	. . . V . Q .
21.417	347.8713	512.80	. . . V . Q .
21.500	351.2894	496.30	. . . V . Q .
21.583	354.6557	488.79	. . . V . Q .
21.667	358.0038	486.15	. . . V . Q .
21.750	361.3428	484.82	. . . V . Q .
21.833	364.6537	480.74	. . . V . Q .
21.917	367.9567	479.59	. . . V .Q .
22.000	371.2625	480.00	. . . V .Q .
22.083	374.5590	478.66	. . . V .Q .
22.167	377.8506	477.94	. . . V .Q .
22.250	381.1274	475.78	. . . V .Q .
22.333	384.3210	463.71	. . . V Q .
22.417	387.4457	453.71	. . . V Q .
22.500	390.5293	447.73	. . . VQ. .
22.583	393.5896	444.35	. . . VQ. .
22.667	396.6339	442.03	. . . VQ. .
22.750	399.6843	442.93	. . . Q. .
22.833	402.6915	436.64	. . . Q. .
22.917	405.6304	426.73	. . . QV. .
23.000	408.5391	422.34	. . . QV. .
23.083	411.4269	419.31	. . . Q V. .
23.167	414.2779	413.95	. . . Q V .
23.250	417.0756	406.24	. . . Q V .

23.333	419.8197	398.44	. . . Q V .
23.417	422.4901	387.75	. . . Q V .
23.500	425.1219	382.13	. . . Q V .
23.583	427.7217	377.49	. . . Q .V .
23.667	430.2903	372.97	. . . Q .V .
23.750	432.8231	367.75	. . . Q .V .
23.833	435.3224	362.91	. . . Q .V .
23.917	437.7928	358.69	. . . Q .V .
24.000	440.2286	353.68	. . . Q . V .
24.083	442.6214	347.43	. . . Q . V .
24.167	444.9667	340.54	. . . Q . V .
24.250	447.2697	334.40	. . . Q . V .
24.333	449.5339	328.76	. . .Q . V .
24.417	451.7632	323.69	. . .Q . V .
24.500	453.9622	319.29	. . .Q . V .
24.583	456.1277	314.43	. . Q . V .
24.667	458.2504	308.22	. . Q . V .
24.750	460.3375	303.04	. . Q . V .
24.833	462.3911	298.19	. . Q. . V .
24.917	464.4123	293.48	. . Q. . V .
25.000	466.3890	287.02	. . Q. . V .
25.083	468.3280	281.54	. . Q . . V .
25.167	470.2345	276.82	. . Q . . V .
25.250	472.1093	272.22	. . Q . . V .
25.333	473.9515	267.49	. . Q . . V .
25.417	475.7613	262.79	. . Q . . V .
25.500	477.5374	257.88	. . Q . . V .
25.583	479.2838	253.58	. . Q . . V .
25.667	481.0009	249.33	. . Q . . V .
25.750	482.6885	245.04	. . Q . . V .
25.833	484.3466	240.75	. . Q . . V .
25.917	485.9749	236.42	. . Q . . V .
26.000	487.5716	231.85	. . Q . . V .
26.083	489.1407	227.82	. . Q . . V .
26.167	490.6833	223.99	. . Q . . V .
26.250	492.1988	220.06	. . Q . . V .
26.333	493.6866	216.02	. . Q . . V .
26.417	495.1461	211.92	. . Q . . V .
26.500	496.5724	207.11	. . Q . . V .
26.583	497.9639	202.05	. . Q . . V .
26.667	499.3311	198.52	. . Q . . V .
26.750	500.6750	195.12	. . Q . . V .
26.833	501.9940	191.52	. . Q . . V .
26.917	503.2843	187.35	. . Q . . V .
27.000	504.5489	183.62	. . Q . . V .
27.083	505.7903	180.24	. . Q . . V .
27.167	507.0083	176.86	. .Q . . V .
27.250	508.2025	173.40	. .Q . . V .
27.333	509.3694	169.43	. .Q . . V .
27.417	510.5042	164.77	. Q . . V .
27.500	511.6147	161.25	. Q . . V .
27.583	512.7018	157.85	. Q . . V .
27.667	513.7657	154.47	. Q . . V .
27.750	514.8077	151.29	. Q . . V .
27.833	515.8281	148.16	. Q. . V .
27.917	516.8271	145.07	. Q. . V .
28.000	517.8055	142.06	. Q. . V .
28.083	518.7629	139.01	. Q. . V .

28.167	519.6990	135.92	.	Q.	.	.	V .
28.250	520.6147	132.95	.	Q .	.	.	V .
28.333	521.5101	130.02	.	Q .	.	.	V .
28.417	522.3836	126.83	.	Q .	.	.	V .
28.500	523.2369	123.89	.	Q .	.	.	V .
28.583	524.0717	121.21	.	Q .	.	.	V .
28.667	524.8892	118.71	.	Q .	.	.	V .
28.750	525.6813	115.01	.	Q .	.	.	V .
28.833	526.4485	111.40	.	Q .	.	.	V .
28.917	527.1949	108.39	.	Q .	.	.	V .
29.000	527.9230	105.72	.	Q .	.	.	V .
29.083	528.6309	102.78	.	Q .	.	.	V .
29.167	529.3184	99.83	.	Q .	.	.	V .
29.250	529.9855	96.87	.	Q .	.	.	V .
29.333	530.6308	93.69	.	Q .	.	.	V .
29.417	531.2535	90.43	.	Q .	.	.	V .
29.500	531.8583	87.82	.	Q .	.	.	V .
29.583	532.4467	85.42	.	Q .	.	.	V .
29.667	533.0182	82.99	.	Q .	.	.	V .
29.750	533.5746	80.79	.	Q .	.	.	V .
29.833	534.1170	78.75	.	Q .	.	.	V .
29.917	534.6445	76.59	.	Q .	.	.	V .
30.000	535.1564	74.34	.	Q .	.	.	V .
30.083	535.6522	71.98	.	Q .	.	.	V .
30.167	536.1302	69.42	.	Q .	.	.	V.
30.250	536.5898	66.74	.	Q .	.	.	V.
30.333	537.0339	64.48	.	Q .	.	.	V.
30.417	537.4638	62.42	.	Q .	.	.	V.
30.500	537.8802	60.46	.	Q .	.	.	V.
30.583	538.2834	58.56	.	Q .	.	.	V.
30.667	538.6735	56.63	.	Q .	.	.	V.
30.750	539.0499	54.66	.	Q .	.	.	V.
30.833	539.4137	52.81	.	Q .	.	.	V.
30.917	539.7670	51.29	.	Q .	.	.	V.
31.000	540.1097	49.77	.	Q .	.	.	V.
31.083	540.4414	48.16	.	Q .	.	.	V.
31.167	540.7623	46.59	.	Q .	.	.	V.
31.250	541.0722	45.01	.	Q .	.	.	V.
31.333	541.3723	43.58	.	Q .	.	.	V.
31.417	541.6637	42.31	.	Q .	.	.	V.
31.500	541.9473	41.17	.	Q .	.	.	V.
31.583	542.2228	40.00	.	Q .	.	.	V.
31.667	542.4904	38.86	.	Q .	.	.	V.
31.750	542.7501	37.71	.	Q .	.	.	V.
31.833	543.0019	36.56	.	Q .	.	.	V.
31.917	543.2456	35.39	.	Q .	.	.	V.
32.000	543.4813	34.22	.	Q .	.	.	V.
32.083	543.7092	33.10	.	Q .	.	.	V.
32.167	543.9299	32.04	.	Q .	.	.	V.
32.250	544.1432	30.99	.	Q .	.	.	V.
32.333	544.3496	29.96	.	Q .	.	.	V.
32.417	544.5493	29.00	.	Q .	.	.	V.
32.500	544.7421	27.98	.	Q .	.	.	V.
32.583	544.9279	26.98	.	Q .	.	.	V.
32.667	545.1075	26.08	.	Q .	.	.	V.
32.750	545.2811	25.21	.	Q .	.	.	V.
32.833	545.4488	24.35	.	Q .	.	.	V.
32.917	545.6106	23.50	.	Q .	.	.	V.

33.000	545.7673	22.75	.	Q .	.	.	V.
33.083	545.9191	22.04	.	Q .	.	.	V.
33.167	546.0660	21.33	.	Q .	.	.	V.
33.250	546.2081	20.64	.	Q .	.	.	V.
33.333	546.3455	19.94	.	Q .	.	.	V.
33.417	546.4782	19.27	.	Q .	.	.	V.
33.500	546.6066	18.64	.	Q .	.	.	V.
33.583	546.7306	18.01	.	Q .	.	.	V.
33.667	546.8503	17.39	.	Q .	.	.	V.
33.750	546.9658	16.77	.	Q .	.	.	V.
33.833	547.0776	16.22	.	Q .	.	.	V.
33.917	547.1857	15.70	.	Q .	.	.	V.
34.000	547.2905	15.21	.	Q .	.	.	V.
34.083	547.3918	14.71	.	Q .	.	.	V.
34.167	547.4898	14.23	.	Q .	.	.	V.
34.250	547.5845	13.75	.	Q .	.	.	V.
34.333	547.6757	13.24	.	Q .	.	.	V.
34.417	547.7629	12.67	.	Q .	.	.	V.
34.500	547.8434	11.68	.	Q .	.	.	V.
34.583	547.9204	11.18	.	Q .	.	.	V.
34.667	547.9949	10.81	.	Q .	.	.	V.
34.750	548.0669	10.46	.	Q .	.	.	V.
34.833	548.1361	10.05	.	Q .	.	.	V.
34.917	548.2023	9.62	.	Q .	.	.	V.
35.000	548.2656	9.18	.	Q .	.	.	V.
35.083	548.3258	8.75	.	Q .	.	.	V.
35.167	548.3831	8.32	.	Q .	.	.	V.
35.250	548.4373	7.88	.	Q .	.	.	V.
35.333	548.4887	7.46	.	Q .	.	.	V.
35.417	548.5377	7.11	.	Q .	.	.	V.
35.500	548.5846	6.82	.	Q .	.	.	V.
35.583	548.6296	6.54	.	Q .	.	.	V.
35.667	548.6728	6.27	.	Q .	.	.	V.
35.750	548.7141	6.00	.	Q .	.	.	V.
35.833	548.7536	5.73	.	Q .	.	.	V.
35.917	548.7913	5.47	.	Q .	.	.	V.
36.000	548.8271	5.20	.	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%	2165.0
10%	1560.0
20%	1295.0
30%	955.0
40%	735.0
50%	600.0
60%	495.0
70%	400.0
80%	310.0
90%	210.0

END OF FLOODSCx ROUTING ANALYSIS

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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 2-YR EV DEC 2022 ROKAMOTO                                              *
 **************************************************************************

  FILE NAME: EV02126S.DAT
  TIME/DATE OF STUDY: 16:40 12/12/2022


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   50438.699 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    5.554 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.595; LOW LOSS FRACTION = 0.932
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.16; 30-MINUTE =  0.30;  1-HOUR =  0.41
    3-HOUR =  0.77;    6-HOUR =  1.14; 24-HOUR =  2.02
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.341; 30-MINUTE = 0.392;  1-HOUR = 0.432
    3-HOUR = 0.782;    6-HOUR = 0.902; 24-HOUR = 0.943
==========================================================================
```



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 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV02126S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     126.00| Subarea (UH) Added to Stream #1|       0.0       510.4|
20.583 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
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   END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 2-YR EV DEC 2022 ROKAMOTO                                              *
 ************************************************************************

  FILE NAME: EV02127S.DAT
  TIME/DATE OF STUDY: 16:40 12/12/2022


                        ** INPUT SUMMARY **


*****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    127.00 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
=============================================================================
  WATERSHED AREA =   53506.199 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    5.777 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.574; LOW LOSS FRACTION = 0.925
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.16; 30-MINUTE =  0.30;  1-HOUR =  0.41
    3-HOUR =  0.76;    6-HOUR =  1.12; 24-HOUR =  1.98
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.331; 30-MINUTE = 0.383;  1-HOUR = 0.424
    3-HOUR = 0.773;    6-HOUR = 0.898; 24-HOUR = 0.941
=============================================================================
```



```
 +-----------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV02127S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     127.00| Subarea (UH) Added to Stream #1|       0.0       575.4|
20.750 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-----------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
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                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137                                  *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
* 2-YR EV DEC 2022 ROKAMOTO                                                *
 **************************************************************************

  FILE NAME: EV02137S.DAT
  TIME/DATE OF STUDY: 16:43 12/12/2022


                        ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    137.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   67798.297 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    6.288 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.569; LOW LOSS FRACTION = 0.905
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.15; 30-MINUTE =  0.29;  1-HOUR =  0.40
    3-HOUR =  0.73;    6-HOUR =  1.07; 24-HOUR =  1.87
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933
============================================================================
```



```
 +--------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV02137S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     137.00| Subarea (UH) Added to Stream #1|       0.0       825.8|
21.167 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                          |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                  |
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   END OF FLOODSCx ROUTING ANALYSIS
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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 2-YR EV DEC 2022 ROKAMOTO                                              *
 ************************************************************************

  FILE NAME: EV02138S.DAT
  TIME/DATE OF STUDY: 16:43 12/12/2022


                       ** INPUT SUMMARY **


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    138.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==============================================================================
  WATERSHED AREA =   69102.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    6.463 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.569; LOW LOSS FRACTION = 0.905
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.15; 30-MINUTE =  0.29;  1-HOUR =  0.40
    3-HOUR =  0.73;    6-HOUR =  1.06; 24-HOUR =  1.86
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932
==============================================================================
```



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 +-------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV02138S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     138.00| Subarea (UH) Added to Stream #1|       0.0       825.0|
21.333 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
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   END OF FLOODSCx ROUTING ANALYSIS
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                        Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139                                  *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
* 2-YR EV DEC 2022 ROKAMOTO                                                *
 **************************************************************************

  FILE NAME: EV02139S.DAT
  TIME/DATE OF STUDY: 16:43 12/12/2022


                         ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    139.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   69529.797 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    6.549 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.568; LOW LOSS FRACTION = 0.903
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.15; 30-MINUTE =  0.29;  1-HOUR =  0.40
    3-HOUR =  0.73;    6-HOUR =  1.06; 24-HOUR =  1.86
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932
============================================================================
```



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 +--------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV02139S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     139.00| Subarea (UH) Added to Stream #1|       0.0       840.5|
21.333 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                               |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                       |
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   END OF FLOODSCx ROUTING ANALYSIS
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                           Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C                                 *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
* 25-YR EV DEC 2022 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV2533CS.DAT
  TIME/DATE OF STUDY: 16:05 12/12/2022


                          ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   60992.301 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.477 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.287; LOW LOSS FRACTION = 0.449
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.40; 30-MINUTE =  0.77;  1-HOUR =  1.05
    3-HOUR =  1.94;    6-HOUR =  2.85; 24-HOUR =  4.99
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936
============================================================================
```



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 +--------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV2533CS.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0     16011.8|
18.083 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                           |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                   |
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   END OF FLOODSCx ROUTING ANALYSIS
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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 25-YR EV OCT 2022 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV2533TS.DAT
  TIME/DATE OF STUDY: 10:38 10/25/2022


**************************************************************************
  FLOW PROCESS FROM NODE  13010.00 TO NODE    133.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    6638.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.206 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.239
         LOW LOSS FRACTION = 0.526
         *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 = 0.744
          30-MINUTE FACTOR = 0.744
           1-HOUR FACTOR = 0.744
           3-HOUR FACTOR = 0.959
           6-HOUR FACTOR = 0.978
          24-HOUR FACTOR = 0.987

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.910
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UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.395	316.989
2	1.185	633.979
3	2.019	670.109
4	3.163	917.836
5	4.690	1226.103
6	7.181	1999.663
7	10.570	2720.600
8	14.287	2984.468
9	18.393	3296.606
10	22.722	3474.990
11	27.082	3500.271
12	32.026	3969.360
13	37.267	4207.138
14	43.209	4770.197
15	49.794	5286.578
16	55.095	4255.617
17	60.875	4640.229
18	66.431	4460.422
19	71.204	3832.200
20	75.442	3401.795
21	78.735	2644.140
22	81.874	2519.473
23	84.745	2305.094
24	87.116	1903.452
25	88.951	1473.384
26	90.515	1255.030
27	91.955	1156.486
28	93.290	1071.680
29	94.404	894.063
30	95.282	704.808
31	96.081	641.954
32	96.640	448.731
33	97.182	434.999
34	97.724	435.232
35	98.063	272.413
36	98.193	104.161
37	98.323	104.038
38	98.452	103.701
39	98.582	104.044
40	98.711	104.155
41	98.841	103.818
42	98.970	104.155
43	99.100	103.928
44	99.229	103.928
45	99.359	103.928
46	99.488	103.928
47	99.618	103.928
48	99.747	103.928

49	99.877	103.928
50	100.000	99.083

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 964.8243
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1042.8773

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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.	725.0	1450.0	2175.0	2900.0
0.083	0.0049	0.72	Q	.	.	.	.
0.167	0.0197	2.15	Q	.	.	.	.
0.250	0.0450	3.66	Q	.	.	.	.
0.333	0.0845	5.75	Q	.	.	.	.
0.417	0.1433	8.53	Q	.	.	.	.
0.500	0.2333	13.07	Q	.	.	.	.
0.583	0.3658	19.24	Q	.	.	.	.
0.667	0.5451	26.04	Q	.	.	.	.
0.750	0.7762	33.56	Q	.	.	.	.
0.833	1.0621	41.50	Q	.	.	.	.
0.917	1.4032	49.53	Q	.	.	.	.
1.000	1.8071	58.65	Q	.	.	.	.
1.083	2.2777	68.33	Q	.	.	.	.
1.167	2.8239	79.31	VQ	.	.	.	.
1.250	3.4540	91.49	VQ	.	.	.	.
1.333	4.1523	101.39	VQ	.	.	.	.
1.417	4.9250	112.20	VQ	.	.	.	.
1.500	5.7696	122.63	VQ	.	.	.	.
1.583	6.6765	131.68	VQ	.	.	.	.
1.667	7.6393	139.80	VQ	.	.	.	.
1.750	8.6464	146.23	V Q	.	.	.	.
1.833	9.6960	152.41	V Q	.	.	.	.
1.917	10.7851	158.13	V Q	.	.	.	.
2.000	11.9074	162.96	V Q	.	.	.	.
2.083	13.0565	166.84	V Q	.	.	.	.
2.167	14.2290	170.25	V Q	.	.	.	.
2.250	15.4236	173.45	V Q	.	.	.	.
2.333	16.6389	176.47	V Q	.	.	.	.
2.417	17.8724	179.10	V Q	.	.	.	.
2.500	19.1212	181.32	V Q	.	.	.	.
2.583	20.3844	183.41	V Q	.	.	.	.
2.667	21.6590	185.08	V Q	.	.	.	.
2.750	22.9450	186.72	V Q	.	.	.	.
2.833	24.2423	188.37	V Q	.	.	.	.
2.917	25.5485	189.67	V Q	.	.	.	.
3.000	26.8612	190.59	.VQ	.	.	.	.
3.083	28.1802	191.52	.VQ	.	.	.	.
3.167	29.5057	192.46	.VQ	.	.	.	.
3.250	30.8377	193.41	.VQ	.	.	.	.
3.333	32.1762	194.36	.VQ	.	.	.	.
3.417	33.5214	195.32	.VQ	.	.	.	.
3.500	34.8733	196.29	.VQ	.	.	.	.
3.583	36.2319	197.27	.VQ	.	.	.	.
3.667	37.5972	198.25	.VQ	.	.	.	.
3.750	38.9695	199.25	.VQ	.	.	.	.
3.833	40.3486	200.25	.VQ	.	.	.	.
3.917	41.7347	201.26	.VQ	.	.	.	.

4.000	43.1278	202.28	.VQ	.	.	.	.
4.083	44.5280	203.31	.VQ	.	.	.	.
4.167	45.9352	204.33	.VQ	.	.	.	.
4.250	47.3480	205.14	.VQ	.	.	.	.
4.333	48.7665	205.96	.VQ	.	.	.	.
4.417	50.1907	206.79	.VQ	.	.	.	.
4.500	51.6207	207.63	.VQ	.	.	.	.
4.583	53.0564	208.48	. Q	.	.	.	.
4.667	54.4981	209.33	. Q	.	.	.	.
4.750	55.9457	210.20	. Q	.	.	.	.
4.833	57.3994	211.07	. Q	.	.	.	.
4.917	58.8591	211.95	. Q	.	.	.	.
5.000	60.3250	212.85	. Q	.	.	.	.
5.083	61.7971	213.75	. Q	.	.	.	.
5.167	63.2755	214.66	. Q	.	.	.	.
5.250	64.7602	215.59	. Q	.	.	.	.
5.333	66.2514	216.52	. Q	.	.	.	.
5.417	67.7491	217.46	. Q	.	.	.	.
5.500	69.2534	218.42	. VQ	.	.	.	.
5.583	70.7643	219.39	. VQ	.	.	.	.
5.667	72.2820	220.36	. VQ	.	.	.	.
5.750	73.8064	221.35	. VQ	.	.	.	.
5.833	75.3378	222.35	. VQ	.	.	.	.
5.917	76.8762	223.37	. VQ	.	.	.	.
6.000	78.4216	224.39	. Q	.	.	.	.
6.083	79.9741	225.43	. Q	.	.	.	.
6.167	81.5339	226.48	. Q	.	.	.	.
6.250	83.1010	227.54	. Q	.	.	.	.
6.333	84.6755	228.62	. Q	.	.	.	.
6.417	86.2575	229.71	. Q	.	.	.	.
6.500	87.8471	230.81	. Q	.	.	.	.
6.583	89.4444	231.93	. Q	.	.	.	.
6.667	91.0495	233.06	. Q	.	.	.	.
6.750	92.6625	234.21	. Q	.	.	.	.
6.833	94.2835	235.37	. Q	.	.	.	.
6.917	95.9125	236.54	. Q	.	.	.	.
7.000	97.5498	237.73	. Q	.	.	.	.
7.083	99.1954	238.94	. Q	.	.	.	.
7.167	100.8494	240.16	. Q	.	.	.	.
7.250	102.5120	241.40	. Q	.	.	.	.
7.333	104.1832	242.66	. Q	.	.	.	.
7.417	105.8632	243.93	. QV	.	.	.	.
7.500	107.5520	245.22	. QV	.	.	.	.
7.583	109.2499	246.53	. QV	.	.	.	.
7.667	110.9569	247.86	. QV	.	.	.	.
7.750	112.6733	249.21	. QV	.	.	.	.
7.833	114.3990	250.57	. QV	.	.	.	.
7.917	116.1343	251.96	. QV	.	.	.	.
8.000	117.8792	253.37	. QV	.	.	.	.
8.083	119.6340	254.80	. QV	.	.	.	.
8.167	121.3987	256.24	. QV	.	.	.	.
8.250	123.1736	257.71	. QV	.	.	.	.
8.333	124.9588	259.20	. QV	.	.	.	.
8.417	126.7544	260.72	. QV	.	.	.	.
8.500	128.5605	262.26	. QV	.	.	.	.
8.583	130.3775	263.82	. Q V	.	.	.	.
8.667	132.2054	265.41	. Q V	.	.	.	.
8.750	134.0444	267.02	. Q V	.	.	.	.

8.833	135.8946	268.66	. Q V	.	.	.	.
8.917	137.7564	270.32	. Q V	.	.	.	.
9.000	139.6297	272.01	. Q V	.	.	.	.
9.083	141.5150	273.74	. Q V	.	.	.	.
9.167	143.4123	275.48	. Q V	.	.	.	.
9.250	145.3218	277.26	. Q V	.	.	.	.
9.333	147.2438	279.07	. Q V	.	.	.	.
9.417	149.1784	280.91	. Q V	.	.	.	.
9.500	151.1260	282.78	. Q V	.	.	.	.
9.583	153.0867	284.69	. Q V	.	.	.	.
9.667	155.0607	286.63	. Q V	.	.	.	.
9.750	157.0483	288.60	. Q V	.	.	.	.
9.833	159.0498	290.61	. Q V	.	.	.	.
9.917	161.0654	292.66	. Q V	.	.	.	.
10.000	163.0953	294.75	. Q V	.	.	.	.
10.083	165.1399	296.87	. Q V	.	.	.	.
10.167	167.1994	299.04	. Q V	.	.	.	.
10.250	169.2741	301.25	. Q V	.	.	.	.
10.333	171.3643	303.50	. Q V	.	.	.	.
10.417	173.4704	305.80	. Q V	.	.	.	.
10.500	175.5925	308.14	. Q V	.	.	.	.
10.583	177.7311	310.53	. Q V	.	.	.	.
10.667	179.8865	312.97	. Q V	.	.	.	.
10.750	182.0591	315.46	. Q V	.	.	.	.
10.833	184.2492	318.00	. Q V	.	.	.	.
10.917	186.4572	320.60	. Q V	.	.	.	.
11.000	188.6834	323.25	. Q V	.	.	.	.
11.083	190.9284	325.97	. Q V	.	.	.	.
11.167	193.1924	328.74	. Q V	.	.	.	.
11.250	195.4760	331.58	. Q V	.	.	.	.
11.333	197.7795	334.47	. Q V	.	.	.	.
11.417	200.1035	337.45	. Q V	.	.	.	.
11.500	202.4484	340.48	. Q V	.	.	.	.
11.583	204.8148	343.60	. Q V	.	.	.	.
11.667	207.2031	346.78	. Q V	.	.	.	.
11.750	209.6140	350.06	. Q V	.	.	.	.
11.833	212.0479	353.40	. Q V	.	.	.	.
11.917	214.5055	356.84	. Q V	.	.	.	.
12.000	216.9874	360.37	. Q V	.	.	.	.
12.083	219.4979	364.53	. Q V	.	.	.	.
12.167	222.0414	369.33	. Q V	.	.	.	.
12.250	224.6192	374.30	. Q V	.	.	.	.
12.333	227.2349	379.79	. Q V	.	.	.	.
12.417	229.8928	385.93	. Q V	.	.	.	.
12.500	232.6030	393.51	. Q V	.	.	.	.
12.583	235.3747	402.46	. Q V.	.	.	.	.
12.667	238.2121	411.99	. Q V.	.	.	.	.
12.750	241.1199	422.21	. Q V.	.	.	.	.
12.833	244.1011	432.88	. Q V.	.	.	.	.
12.917	247.1573	443.76	. Q V.	.	.	.	.
13.000	250.2951	455.61	. Q V.	.	.	.	.
13.083	253.5186	468.05	. Q V.	.	.	.	.
13.167	256.8358	481.64	. Q V.	.	.	.	.
13.250	260.2540	496.32	. Q V.	.	.	.	.
13.333	263.7626	509.45	. Q V	.	.	.	.
13.417	267.3677	523.47	. Q V	.	.	.	.
13.500	271.0689	537.40	. Q V	.	.	.	.
13.583	274.8604	550.53	. Q V	.	.	.	.

13.667	278.7389	563.16	. Q V . . .
13.750	282.6975	574.79	. Q V . . .
13.833	286.7367	586.48	. Q V . . .
13.917	290.8560	598.12	. Q .V . . .
14.000	295.0529	609.39	. Q .V . . .
14.083	299.3336	621.56	. Q .V . . .
14.167	303.7068	634.99	. Q .V . . .
14.250	308.1750	648.78	. Q .V . . .
14.333	312.7467	663.81	. Q.V . . .
14.417	317.4314	680.22	. Q. V . . .
14.500	322.2514	699.86	. Q. V . . .
14.583	327.2292	722.78	. Q. V . . .
14.667	332.3731	746.88	. Q V . . .
14.750	337.6949	772.73	. Q V . . .
14.833	343.2032	799.80	. .Q V . . .
14.917	348.9007	827.28	. .Q V . . .
15.000	354.8026	856.96	. .Q V . . .
15.083	360.9204	888.30	. . QV . . .
15.167	367.2746	922.62	. . Q V . . .
15.250	373.8865	960.05	. . QV . . .
15.333	380.7354	994.47	. . QV . . .
15.417	387.8203	1028.72	. . Q . . .
15.500	395.1250	1060.64	. . QV . . .
15.583	402.6424	1091.53	. . Q . . .
15.667	410.3613	1120.78	. . Q . . .
15.750	418.2668	1147.88	. . QV . . .
15.833	426.3405	1172.31	. . Q . . .
15.917	434.5974	1198.90	. . Q . . .
16.000	443.1238	1238.03	. . VQ . . .
16.083	452.3417	1338.44	. . VQ . . .
16.167	462.2409	1437.36	. . V Q. . .
16.250	472.5172	1492.12	. . V Q . .
16.333	483.5163	1597.07	. . V . Q . .
16.417	495.4706	1735.76	. . V. Q . .
16.500	508.9476	1956.86	. . V. Q . .
16.583	523.7136	2144.02	. . V Q. .
16.667	539.1368	2239.44	. . V Q .
16.750	555.1495	2325.05	. . .V . Q .
16.833	571.5921	2387.46	. . .V . Q .
16.917	588.3792	2437.48	. . . V . Q .
17.000	606.0828	2570.57	. . . V . Q .
17.083	624.4658	2669.22	. . . V . Q .
17.167	643.7252	2796.45	. . . V . Q .
17.250	663.4760	2867.82	. . . V . Q.
17.333	681.7633	2655.32	. . . V . Q .
17.417	700.2509	2684.39	. . . V . Q .
17.500	718.1039	2592.27	. . . V . Q .
17.583	734.6346	2400.26	. . . V . Q .
17.667	749.9801	2228.16	. . . V Q .
17.750	763.8768	2017.81	. . . Q V. .
17.833	777.1641	1929.32	. . . Q V. .
17.917	789.6849	1818.02	. . . Q V .
18.000	801.1758	1668.47	. . . Q V .
18.083	811.6170	1516.07	. . Q .V .
18.167	821.3438	1412.33	. . Q. .V .
18.250	830.5394	1335.20	. . Q . .V .
18.333	839.2350	1262.60	. . Q . . V .
18.417	847.2843	1168.76	. . Q . . V .

18.500	854.6859	1074.71	. . Q . . V .
18.583	861.6268	1007.82	. . Q . . V .
18.667	867.9954	924.73	. . Q . . V .
18.750	874.0450	878.40	. . Q . . V .
18.833	879.7704	831.32	. .Q . . V .
18.917	884.9749	755.69	. Q . . V .
19.000	889.6937	685.18	. Q. . . V .
19.083	894.1957	653.68	. Q. . . V .
19.167	898.5086	626.23	. Q . . . V .
19.250	902.6307	598.53	. Q . . . V .
19.333	906.5751	572.72	. Q . . . V .
19.417	910.3496	548.06	. Q . . . V .
19.500	913.9686	525.48	. Q . . . V .
19.583	917.4519	505.77	. Q . . . V .
19.667	920.8145	488.24	. Q . . . V .
19.750	924.0688	472.53	. Q . . . V .
19.833	927.2194	457.47	. Q . . . V .
19.917	930.2734	443.45	. Q . . . V .
20.000	933.2395	430.68	. Q . . . V .
20.083	936.1125	417.16	. Q . . . V .
20.167	938.8766	401.34	. Q . . . V .
20.250	941.4275	370.39	. Q . . . V .
20.333	943.9066	359.96	. Q . . . V .
20.417	946.3284	351.65	. Q . . . V .
20.500	948.6990	344.21	. Q . . . V .
20.583	951.0154	336.35	. Q . . . V .
20.667	953.2834	329.31	. Q . . . V .
20.750	955.5052	322.61	. Q . . . V .
20.833	957.6827	316.18	. Q . . . V .
20.917	959.8196	310.28	. Q . . . V .
21.000	961.9194	304.89	. Q . . . V .
21.083	963.9835	299.70	. Q . . . V .
21.167	966.0132	294.72	. Q . . . V .
21.250	968.0126	290.31	. Q . . . V .
21.333	969.9828	286.08	. Q . . . V .
21.417	971.9250	282.00	. Q . . . V .
21.500	973.8401	278.07	. Q . . . V .
21.583	975.7291	274.28	. Q . . . V .
21.667	977.5928	270.61	. Q . . . V .
21.750	979.4321	267.06	. Q . . . V .
21.833	981.2477	263.63	. Q . . . V .
21.917	983.0404	260.30	. Q . . . V .
22.000	984.8109	257.08	. Q . . . V .
22.083	986.5599	253.95	. Q . . . V .
22.167	988.2880	250.92	. Q . . . V .
22.250	989.9971	248.15	. Q . . . V .
22.333	991.6876	245.46	. Q . . . V .
22.417	993.3600	242.84	. Q . . . V .
22.500	995.0150	240.30	. Q . . . V .
22.583	996.6530	237.83	. Q . . . V .
22.667	998.2744	235.42	. Q . . . V .
22.750	999.8796	233.08	. Q . . . V .
22.833	1001.4691	230.80	. Q . . . V .
22.917	1003.0434	228.58	. Q . . . V .
23.000	1004.6027	226.42	. Q . . . V .
23.083	1006.1475	224.31	. Q . . . V .
23.167	1007.6782	222.25	. Q . . . V .
23.250	1009.1949	220.24	. Q . . . V .

23.333	1010.6982	218.27	. Q	.	.	.	V .
23.417	1012.1883	216.36	. Q	.	.	.	V .
23.500	1013.6655	214.49	. Q	.	.	.	V .
23.583	1015.1300	212.65	. Q	.	.	.	V .
23.667	1016.5823	210.87	. Q	.	.	.	V .
23.750	1018.0225	209.12	. Q	.	.	.	V.
23.833	1019.4509	207.40	. Q	.	.	.	V.
23.917	1020.8677	205.73	. Q	.	.	.	V.
24.000	1022.2733	204.09	. Q	.	.	.	V.
24.083	1023.6629	201.77	. Q	.	.	.	V.
24.167	1025.0319	198.77	. Q	.	.	.	V.
24.250	1026.3799	195.74	. Q	.	.	.	V.
24.333	1027.7035	192.18	. Q	.	.	.	V.
24.417	1028.9982	187.98	. Q	.	.	.	V.
24.500	1030.2522	182.08	. Q	.	.	.	V.
24.583	1031.4548	174.61	. Q	.	.	.	V.
24.667	1032.6023	166.62	. Q	.	.	.	V.
24.750	1033.6903	157.99	. Q	.	.	.	V.
24.833	1034.7167	149.03	. Q	.	.	.	V.
24.917	1035.6814	140.08	.Q	.	.	.	V.
25.000	1036.5778	130.15	.Q	.	.	.	V.
25.083	1037.4025	119.76	.Q	.	.	.	V.
25.167	1038.1475	108.17	.Q	.	.	.	V.
25.250	1038.8053	95.51	.Q	.	.	.	V.
25.333	1039.3926	85.27	.Q	.	.	.	V.
25.417	1039.9038	74.22	.Q	.	.	.	V.
25.500	1040.3423	63.67	Q	.	.	.	V.
25.583	1040.7183	54.60	Q	.	.	.	V.
25.667	1041.0389	46.56	Q	.	.	.	V.
25.750	1041.3164	40.28	Q	.	.	.	V.
25.833	1041.5529	34.33	Q	.	.	.	V.
25.917	1041.7520	28.90	Q	.	.	.	V.
26.000	1041.9202	24.42	Q	.	.	.	V.
26.083	1042.0643	20.93	Q	.	.	.	V.
26.167	1042.1880	17.96	Q	.	.	.	V.
26.250	1042.2928	15.23	Q	.	.	.	V.
26.333	1042.3804	12.71	Q	.	.	.	V.
26.417	1042.4535	10.61	Q	.	.	.	V.
26.500	1042.5151	8.95	Q	.	.	.	V.
26.583	1042.5664	7.44	Q	.	.	.	V.
26.667	1042.6104	6.38	Q	.	.	.	V.
26.750	1042.6472	5.36	Q	.	.	.	V.
26.833	1042.6771	4.34	Q	.	.	.	V.
26.917	1042.7026	3.70	Q	.	.	.	V.
27.000	1042.7263	3.44	Q	.	.	.	V.
27.083	1042.7482	3.18	Q	.	.	.	V.
27.167	1042.7683	2.92	Q	.	.	.	V.
27.250	1042.7867	2.67	Q	.	.	.	V.
27.333	1042.8033	2.42	Q	.	.	.	V.
27.417	1042.8182	2.17	Q	.	.	.	V.
27.500	1042.8314	1.92	Q	.	.	.	V.
27.583	1042.8429	1.67	Q	.	.	.	V.
27.667	1042.8527	1.43	Q	.	.	.	V.
27.750	1042.8608	1.18	Q	.	.	.	V.
27.833	1042.8673	0.94	Q	.	.	.	V.
27.917	1042.8721	0.70	Q	.	.	.	V.
28.000	1042.8752	0.46	Q	.	.	.	V.
28.083	1042.8768	0.22	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%	1685.0
10%	695.0
20%	335.0
30%	225.0
40%	165.0
50%	120.0
60%	95.0
70%	75.0
80%	55.0
90%	30.0

END OF FLOODSCx ROUTING ANALYSIS

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                         Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U                                 *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
* 25-YR EV DEC 2022 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV2533US.DAT
  TIME/DATE OF STUDY: 16:05 12/12/2022


                        ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   54354.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.477 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.293; LOW LOSS FRACTION = 0.440
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.41; 30-MINUTE =  0.77;  1-HOUR =  1.07
    3-HOUR =  1.98;    6-HOUR =  2.93; 24-HOUR =  5.15
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940
============================================================================
```



```
 +--------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV2533US.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0     15127.6|
18.083 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                           |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                   |
 +--------------------------------------------------------------------------
-------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
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_____________________________________________________________________________
*****************************************************************************

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             Ver. 17.0  Release Date: 07/01/2010  License ID 1527

                           Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
 * RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C                                 *
 * PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
 * 25-YR EV AUG 2023 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV2534CS.DAT
  TIME/DATE OF STUDY: 13:30 08/10/2023


                          ** INPUT SUMMARY **


*****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
=============================================================================
  WATERSHED AREA =   66557.602 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.581 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.286; LOW LOSS FRACTION = 0.450
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.40; 30-MINUTE =  0.76;  1-HOUR =  1.05
    3-HOUR =  1.91;    6-HOUR =  2.80; 24-HOUR =  4.88
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.294; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.741;    6-HOUR = 0.887; 24-HOUR = 0.933
=============================================================================
```



```
 +---------------------------------------------------------------------------
------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV2534CS.DAT   ]
Page:   1 of    |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                               | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0     16749.3|
18.167 |             |           |
 +--------------------+-------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                         |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                 |
 +---------------------------------------------------------------------------
------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
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******************************************************************************

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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 25-YR EV OCT 2022 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV2534TS.DAT
  TIME/DATE OF STUDY: 10:39 10/25/2022


******************************************************************************
  FLOW PROCESS FROM NODE  13500.00 TO NODE    134.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3859.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.350 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284
         LOW LOSS FRACTION = 0.463
         *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 = 0.828
          30-MINUTE FACTOR = 0.828
           1-HOUR FACTOR = 0.828
           3-HOUR FACTOR = 0.974
           6-HOUR FACTOR = 0.987
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.173
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.353	164.650
2	1.058	329.300
3	1.769	331.638
4	2.714	441.214
5	3.829	520.304
6	5.610	831.701
7	8.146	1183.457
8	11.272	1459.477
9	14.675	1588.138
10	18.342	1712.027
11	22.143	1773.875
12	26.136	1863.946
13	30.204	1898.763
14	35.128	2298.813
15	39.722	2144.246
16	45.411	2655.306
17	51.285	2742.112
18	55.755	2086.605
19	61.051	2471.806
20	66.050	2333.457
21	70.363	2013.331
22	74.265	1821.628
23	77.506	1512.705
24	80.278	1293.773
25	83.042	1290.464
26	85.470	1133.359
27	87.474	935.449
28	89.059	739.832
29	90.456	652.065
30	91.751	604.468
31	92.957	562.563
32	94.059	514.489
33	94.872	379.571
34	95.655	365.689
35	96.272	287.633
36	96.756	226.041
37	97.240	225.973
38	97.724	225.970
39	98.049	151.678
40	98.165	54.352
41	98.281	54.056
42	98.397	54.202
43	98.513	53.907
44	98.629	54.056
45	98.745	54.202
46	98.860	53.761
47	98.976	54.202
48	99.092	54.056

49	99.208	54.056
50	99.323	54.056
51	99.439	54.056
52	99.555	54.056
53	99.671	54.056
54	99.787	54.056
55	99.902	54.056
56	100.000	45.538

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 499.3369
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 674.7775

==========

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.	450.0	900.0	1350.0	1800.0
0.083	0.0029	0.42	Q	.	.	.	.
0.167	0.0116	1.26	Q	.	.	.	.
0.250	0.0262	2.11	Q	.	.	.	.
0.333	0.0485	3.25	Q	.	.	.	.
0.417	0.0801	4.59	Q	.	.	.	.
0.500	0.1264	6.73	Q	.	.	.	.
0.583	0.1937	9.77	Q	.	.	.	.
0.667	0.2869	13.53	Q	.	.	.	.
0.750	0.4083	17.63	Q	.	.	.	.
0.833	0.5603	22.06	Q	.	.	.	.
0.917	0.7439	26.66	Q	.	.	.	.
1.000	0.9610	31.51	Q	.	.	.	.
1.083	1.2121	36.47	Q	.	.	.	.
1.167	1.5045	42.46	Q	.	.	.	.
1.250	1.8356	48.08	VQ	.	.	.	.
1.333	2.2146	55.02	VQ	.	.	.	.
1.417	2.6430	62.21	VQ	.	.	.	.
1.500	3.1095	67.74	VQ	.	.	.	.
1.583	3.6211	74.29	VQ	.	.	.	.
1.667	4.1755	80.50	VQ	.	.	.	.
1.750	4.7672	85.91	VQ	.	.	.	.
1.833	5.3929	90.85	V Q	.	.	.	.
1.917	6.0473	95.03	V Q	.	.	.	.
2.000	6.7268	98.66	V Q	.	.	.	.
2.083	7.4313	102.29	V Q	.	.	.	.
2.167	8.1581	105.54	V Q	.	.	.	.
2.250	8.9039	108.29	V Q	.	.	.	.
2.333	9.6654	110.56	V Q	.	.	.	.
2.417	10.4409	112.61	V Q	.	.	.	.
2.500	11.2298	114.55	V Q	.	.	.	.
2.583	12.0314	116.39	V Q	.	.	.	.
2.667	12.8449	118.12	V Q	.	.	.	.
2.750	13.6679	119.51	V Q	.	.	.	.
2.833	14.5004	120.87	V Q	.	.	.	.
2.917	15.3408	122.04	V Q	.	.	.	.
3.000	16.1884	123.06	V Q	.	.	.	.
3.083	17.0429	124.08	.VQ	.	.	.	.
3.167	17.9046	125.11	.VQ	.	.	.	.
3.250	18.7721	125.96	.VQ	.	.	.	.
3.333	19.6437	126.56	.VQ	.	.	.	.
3.417	20.5196	127.17	.VQ	.	.	.	.
3.500	21.3997	127.79	.VQ	.	.	.	.
3.583	22.2840	128.41	.VQ	.	.	.	.
3.667	23.1726	129.03	.VQ	.	.	.	.
3.750	24.0656	129.66	.VQ	.	.	.	.
3.833	24.9629	130.29	.VQ	.	.	.	.
3.917	25.8647	130.93	.VQ	.	.	.	.

4.000	26.7709	131.58	.VQ	.	.	.	.
4.083	27.6816	132.23	.VQ	.	.	.	.
4.167	28.5968	132.89	.VQ	.	.	.	.
4.250	29.5165	133.55	.VQ	.	.	.	.
4.333	30.4409	134.22	.VQ	.	.	.	.
4.417	31.3699	134.89	.VQ	.	.	.	.
4.500	32.3036	135.57	.V Q	.	.	.	.
4.583	33.2421	136.26	.V Q	.	.	.	.
4.667	34.1851	136.93	. VQ	.	.	.	.
4.750	35.1321	137.49	. VQ	.	.	.	.
4.833	36.0829	138.06	. VQ	.	.	.	.
4.917	37.0377	138.63	. VQ	.	.	.	.
5.000	37.9965	139.22	. VQ	.	.	.	.
5.083	38.9593	139.80	. VQ	.	.	.	.
5.167	39.9262	140.39	. VQ	.	.	.	.
5.250	40.8972	140.99	. VQ	.	.	.	.
5.333	41.8724	141.60	. VQ	.	.	.	.
5.417	42.8518	142.21	. VQ	.	.	.	.
5.500	43.8355	142.83	. VQ	.	.	.	.
5.583	44.8235	143.46	. VQ	.	.	.	.
5.667	45.8159	144.09	. VQ	.	.	.	.
5.750	46.8127	144.73	. VQ	.	.	.	.
5.833	47.8140	145.38	. VQ	.	.	.	.
5.917	48.8197	146.04	. VQ	.	.	.	.
6.000	49.8301	146.70	. VQ	.	.	.	.
6.083	50.8451	147.38	. Q	.	.	.	.
6.167	51.8648	148.06	. Q	.	.	.	.
6.250	52.8892	148.75	. Q	.	.	.	.
6.333	53.9184	149.44	. Q	.	.	.	.
6.417	54.9525	150.15	. Q	.	.	.	.
6.500	55.9915	150.86	. Q	.	.	.	.
6.583	57.0355	151.59	. Q	.	.	.	.
6.667	58.0845	152.32	. Q	.	.	.	.
6.750	59.1386	153.06	. Q	.	.	.	.
6.833	60.1979	153.81	. Q	.	.	.	.
6.917	61.2625	154.57	. Q	.	.	.	.
7.000	62.3323	155.34	. Q	.	.	.	.
7.083	63.4076	156.12	. Q	.	.	.	.
7.167	64.4883	156.92	. Q	.	.	.	.
7.250	65.5745	157.72	. Q	.	.	.	.
7.333	66.6663	158.53	. Q	.	.	.	.
7.417	67.7637	159.35	. QV	.	.	.	.
7.500	68.8670	160.19	. QV	.	.	.	.
7.583	69.9760	161.04	. QV	.	.	.	.
7.667	71.0910	161.89	. QV	.	.	.	.
7.750	72.2120	162.76	. QV	.	.	.	.
7.833	73.3390	163.65	. QV	.	.	.	.
7.917	74.4722	164.54	. QV	.	.	.	.
8.000	75.6117	165.45	. QV	.	.	.	.
8.083	76.7575	166.37	. QV	.	.	.	.
8.167	77.9098	167.31	. QV	.	.	.	.
8.250	79.0686	168.26	. QV	.	.	.	.
8.333	80.2340	169.22	. QV	.	.	.	.
8.417	81.4062	170.20	. QV	.	.	.	.
8.500	82.5851	171.19	. QV	.	.	.	.
8.583	83.7711	172.20	. QV	.	.	.	.
8.667	84.9641	173.22	. Q V	.	.	.	.
8.750	86.1642	174.26	. Q V	.	.	.	.

8.833	87.3716	175.32	. Q V	.	.	.	.
8.917	88.5864	176.39	. Q V	.	.	.	.
9.000	89.8087	177.48	. Q V	.	.	.	.
9.083	91.0387	178.59	. Q V	.	.	.	.
9.167	92.2764	179.71	. Q V	.	.	.	.
9.250	93.5219	180.86	. QV	.	.	.	.
9.333	94.7756	182.02	. QV	.	.	.	.
9.417	96.0373	183.21	. QV	.	.	.	.
9.500	97.3074	184.41	. QV	.	.	.	.
9.583	98.5859	185.64	. QV	.	.	.	.
9.667	99.8730	186.89	. QV	.	.	.	.
9.750	101.1688	188.15	. QV	.	.	.	.
9.833	102.4735	189.45	. Q V	.	.	.	.
9.917	103.7873	190.76	. Q V	.	.	.	.
10.000	105.1103	192.10	. Q V	.	.	.	.
10.083	106.4427	193.47	. Q V	.	.	.	.
10.167	107.7847	194.86	. Q V	.	.	.	.
10.250	109.1365	196.27	. Q V	.	.	.	.
10.333	110.4982	197.72	. Q V	.	.	.	.
10.417	111.8700	199.19	. Q V	.	.	.	.
10.500	113.2522	200.70	. Q V	.	.	.	.
10.583	114.6450	202.23	. Q V	.	.	.	.
10.667	116.0485	203.79	. Q V	.	.	.	.
10.750	117.4630	205.38	. Q V	.	.	.	.
10.833	118.8887	207.01	. Q V	.	.	.	.
10.917	120.3259	208.67	. Q V	.	.	.	.
11.000	121.7747	210.38	. Q V	.	.	.	.
11.083	123.2355	212.11	. Q V	.	.	.	.
11.167	124.7085	213.88	. Q V	.	.	.	.
11.250	126.1940	215.69	. Q V	.	.	.	.
11.333	127.6923	217.55	. Q V	.	.	.	.
11.417	129.2036	219.44	. Q V	.	.	.	.
11.500	130.7283	221.39	. Q V	.	.	.	.
11.583	132.2667	223.37	. Q V	.	.	.	.
11.667	133.8191	225.41	. Q V	.	.	.	.
11.750	135.3858	227.49	. Q V	.	.	.	.
11.833	136.9672	229.62	. Q V	.	.	.	.
11.917	138.5637	231.81	. Q V	.	.	.	.
12.000	140.1757	234.06	. Q V	.	.	.	.
12.083	141.8055	236.66	. Q V	.	.	.	.
12.167	143.4558	239.62	. Q V	.	.	.	.
12.250	145.1270	242.65	. Q V	.	.	.	.
12.333	146.8209	245.96	. Q V	.	.	.	.
12.417	148.5391	249.47	. Q V	.	.	.	.
12.500	150.2859	253.64	. Q V	.	.	.	.
12.583	152.0663	258.52	. Q V.	.	.	.	.
12.667	153.8845	264.00	. Q V.	.	.	.	.
12.750	155.7426	269.79	. Q V.	.	.	.	.
12.833	157.6428	275.92	. Q V.	.	.	.	.
12.917	159.5867	282.25	. Q V.	.	.	.	.
13.000	161.5760	288.86	. Q V.	.	.	.	.
13.083	163.6121	295.63	. Q V.	.	.	.	.
13.167	165.7007	303.26	. Q V.	.	.	.	.
13.250	167.8406	310.72	. Q V.	.	.	.	.
13.333	170.0394	319.26	. Q V	.	.	.	.
13.417	172.2989	328.09	. Q V	.	.	.	.
13.500	174.6121	335.87	. Q V	.	.	.	.
13.583	176.9847	344.50	. Q V	.	.	.	.

13.667	179.4162	353.05	. Q V . . .
13.750	181.9036	361.18	. Q V . . .
13.833	184.4460	369.15	. Q V . . .
13.917	187.0405	376.72	. Q .V . . .
14.000	189.6859	384.12	. Q .V . . .
14.083	192.3870	392.19	. Q .V . . .
14.167	195.1468	400.72	. Q .V . . .
14.250	197.9643	409.11	. Q.V . . .
14.333	200.8413	417.74	. Q.V . . .
14.417	203.7800	426.70	. Q. V . . .
14.500	206.7884	436.82	. Q. V . . .
14.583	209.8752	448.19	. Q. V . . .
14.667	213.0478	460.66	. Q V . . .
14.750	216.3095	473.60	. Q V . . .
14.833	219.6655	487.29	. Q V . . .
14.917	223.1187	501.41	. .Q V . . .
15.000	226.6737	516.18	. .Q V . . .
15.083	230.3343	531.52	. .Q V . . .
15.167	234.1129	548.66	. . QV . . .
15.250	238.0095	565.78	. . Q V . . .
15.333	242.0384	584.99	. . Q V . . .
15.417	246.1979	603.96	. . QV . . .
15.500	250.4725	620.68	. . QV . . .
15.583	254.8774	639.59	. . QV . . .
15.667	259.4135	658.64	. . QV . . .
15.750	264.0824	677.94	. . Q . . .
15.833	268.8809	696.74	. . Q . . .
15.917	273.8177	716.82	. . QV . . .
16.000	278.9383	743.51	. . Q . . .
16.083	284.4912	806.28	. . VQ . . .
16.167	290.4594	866.58	. . V Q. . .
16.250	296.6211	894.68	. . V Q. . .
16.333	303.1599	949.45	. . V .Q . .
16.417	310.1175	1010.23	. . V . Q . .
16.500	317.8497	1122.73	. . V . Q . .
16.583	326.3904	1240.11	. . V. Q . .
16.667	335.5378	1328.20	. . V. Q. .
16.750	345.0133	1375.84	. . V Q .
16.833	354.8157	1423.31	. . .V .Q .
16.917	364.8187	1452.43	. . .V . Q .
17.000	375.0927	1491.79	. . . V . Q .
17.083	385.5927	1524.59	. . . V . Q .
17.167	396.7834	1624.90	. . . V . Q .
17.250	407.9354	1619.27	. . . V . Q .
17.333	419.8256	1726.46	. . . V . Q .
17.417	431.6816	1721.49	. . . V . Q .
17.500	442.5182	1573.48	. . . V . Q .
17.583	453.7181	1626.22	. . . V . Q .
17.667	464.4775	1562.27	. . . V . Q .
17.750	474.4877	1453.48	. . . V . Q .
17.833	483.8676	1361.97	. . . V Q .
17.917	492.5076	1254.53	. . . Q V. .
18.000	500.5827	1172.51	. . . Q V. .
18.083	508.3839	1132.73	. . . Q V .
18.167	515.6585	1056.27	. . . Q V .
18.250	522.3466	971.12	. . .Q V .
18.333	528.4770	890.13	. . Q. .V .
18.417	534.2416	837.03	. . Q . .V .

18.500	539.7264	796.38	. . . Q . .V .
18.583	544.9224	754.46	. . . Q . . V .
18.667	549.8122	710.00	. . . Q . . V .
18.750	554.2938	650.72	. . . Q . . V .
18.833	558.5464	617.48	. . . Q . . V .
18.917	562.5002	574.10	. . . Q . . V .
19.000	566.2040	537.78	. . .Q . . V .
19.083	569.7477	514.55	. . .Q . . V .
19.167	573.1167	489.17	. . Q . . V .
19.250	576.2081	448.88	. . Q. . . V .
19.333	579.0121	407.14	. . Q. . . V .
19.417	581.6910	388.96	. . Q . . . V .
19.500	584.2694	374.38	. . Q . . . V .
19.583	586.7465	359.66	. . Q . . . V .
19.667	589.1259	345.49	. . Q . . . V .
19.750	591.4187	332.92	. . Q . . . V .
19.833	593.6307	321.18	. . Q . . . V .
19.917	595.7715	310.84	. . Q . . . V .
20.000	597.8474	301.42	. . Q . . . V .
20.083	599.8631	292.69	. . Q . . . V .
20.167	601.8226	284.52	. . Q . . . V .
20.250	603.7312	277.13	. . Q . . . V .
20.333	605.5945	270.56	. . Q . . . V .
20.417	607.4137	264.14	. . Q . . . . V .
20.500	609.1888	257.74	. . Q . . . . V .
20.583	610.9141	250.51	. . Q . . . . V .
20.667	612.5726	240.82	. . Q . . . . V .
20.750	614.1219	224.96	. . Q . . . . V .
20.833	615.6345	219.61	. . Q . . . . V .
20.917	617.1164	215.18	. . Q . . . . V .
21.000	618.5705	211.14	. . Q . . . . V .
21.083	619.9961	206.99	. . Q . . . . V .
21.167	621.3945	203.06	. . Q . . . . V .
21.250	622.7680	199.43	. . Q . . . . V .
21.333	624.1188	196.13	. . Q . . . . V .
21.417	625.4478	192.97	. . Q . . . . . V .
21.500	626.7559	189.94	. . Q . . . . . V .
21.583	628.0439	187.02	. . Q . . . . . V .
21.667	629.3127	184.23	. . Q . . . . . V .
21.750	630.5640	181.68	. . Q . . . . . V .
21.833	631.7983	179.22	. . Q . . . . . V .
21.917	633.0162	176.84	. . Q . . . . . V .
22.000	634.2184	174.55	. . Q . . . . . V .
22.083	635.4052	172.33	. . Q . . . . . V .
22.167	636.5773	170.18	. . Q . . . . . V .
22.250	637.7350	168.10	. . Q . . . . . V .
22.333	638.8788	166.08	. . Q . . . . . V .
22.417	640.0091	164.12	. . Q . . . . . V .
22.500	641.1263	162.22	. . Q . . . . . . V .
22.583	642.2308	160.37	. . Q . . . . . . V .
22.667	643.3229	158.59	. . Q . . . . . . V .
22.750	644.4037	156.94	. . Q . . . . . . V .
22.833	645.4735	155.33	. . Q . . . . . . V .
22.917	646.5325	153.77	. . Q . . . . . . V .
23.000	647.5811	152.25	. . Q . . . . . . V .
23.083	648.6194	150.77	. . Q . . . . . . V .
23.167	649.6478	149.33	. . Q . . . . . . V .
23.250	650.6666	147.92	. . Q . . . . . . V .

23.333	651.6758	146.55	. Q	.	.	.	V	.
23.417	652.6760	145.21	. Q	.	.	.	V	.
23.500	653.6671	143.91	. Q	.	.	.	V	.
23.583	654.6494	142.63	. Q	.	.	.	V	.
23.667	655.6231	141.39	. Q	.	.	.	V	.
23.750	656.5885	140.17	. Q	.	.	.	V	.
23.833	657.5457	138.99	. Q	.	.	.	V	.
23.917	658.4949	137.82	. Q	.	.	.	V.	
24.000	659.4363	136.69	. Q	.	.	.	V.	
24.083	660.3671	135.15	. Q	.	.	.	V.	
24.167	661.2846	133.23	. Q	.	.	.	V.	
24.250	662.1891	131.33	. Q	.	.	.	V.	
24.333	663.0787	129.17	. Q	.	.	.	V.	
24.417	663.9523	126.84	. Q	.	.	.	V.	
24.500	664.8046	123.75	. Q	.	.	.	V.	
24.583	665.6296	119.79	. Q	.	.	.	V.	
24.667	666.4228	115.17	. Q	.	.	.	V.	
24.750	667.1822	110.26	. Q	.	.	.	V.	
24.833	667.9059	105.08	. Q	.	.	.	V.	
24.917	668.5931	99.78	. Q	.	.	.	V.	
25.000	669.2426	94.30	. Q	.	.	.	V.	
25.083	669.8539	88.78	.Q	.	.	.	V.	
25.167	670.4206	82.27	.Q	.	.	.	V.	
25.250	670.9455	76.22	.Q	.	.	.	V.	
25.333	671.4200	68.90	.Q	.	.	.	V.	
25.417	671.8431	61.42	.Q	.	.	.	V.	
25.500	672.2264	55.66	.Q	.	.	.	V.	
25.583	672.5637	48.97	.Q	.	.	.	V.	
25.667	672.8575	42.67	Q	.	.	.	V.	
25.750	673.1140	37.24	Q	.	.	.	V.	
25.833	673.3367	32.33	Q	.	.	.	V.	
25.917	673.5312	28.24	Q	.	.	.	V.	
26.000	673.7016	24.75	Q	.	.	.	V.	
26.083	673.8481	21.28	Q	.	.	.	V.	
26.167	673.9738	18.24	Q	.	.	.	V.	
26.250	674.0821	15.73	Q	.	.	.	V.	
26.333	674.1766	13.73	Q	.	.	.	V.	
26.417	674.2591	11.97	Q	.	.	.	V.	
26.500	674.3303	10.35	Q	.	.	.	V.	
26.583	674.3912	8.84	Q	.	.	.	V.	
26.667	674.4426	7.46	Q	.	.	.	V.	
26.750	674.4869	6.44	Q	.	.	.	V.	
26.833	674.5246	5.47	Q	.	.	.	V.	
26.917	674.5569	4.69	Q	.	.	.	V.	
27.000	674.5851	4.08	Q	.	.	.	V.	
27.083	674.6091	3.48	Q	.	.	.	V.	
27.167	674.6289	2.88	Q	.	.	.	V.	
27.250	674.6459	2.47	Q	.	.	.	V.	
27.333	674.6619	2.32	Q	.	.	.	V.	
27.417	674.6768	2.16	Q	.	.	.	V.	
27.500	674.6906	2.01	Q	.	.	.	V.	
27.583	674.7034	1.86	Q	.	.	.	V.	
27.667	674.7151	1.71	Q	.	.	.	V.	
27.750	674.7258	1.56	Q	.	.	.	V.	
27.833	674.7355	1.41	Q	.	.	.	V.	
27.917	674.7442	1.26	Q	.	.	.	V.	
28.000	674.7519	1.11	Q	.	.	.	V.	
28.083	674.7585	0.97	Q	.	.	.	V.	

28.167	674.7642	0.82	Q	.	.	.	V.	
28.250	674.7689	0.68	Q	.	.	.	V.	
28.333	674.7726	0.54	Q	.	.	.	V.	
28.417	674.7754	0.40	Q	.	.	.	V.	
28.500	674.7772	0.26	Q	.	.	.	V.	
28.583	674.7780	0.12	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%	1715.0
10%	805.0
20%	365.0
30%	240.0
40%	175.0
50%	135.0
60%	105.0
70%	85.0
80%	60.0
90%	35.0

END OF FLOODSCx ROUTING ANALYSIS

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                          Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U                                  *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                 *
* 25-YR EV AUG 2023 ROKAMOTO                                                *
 **************************************************************************

  FILE NAME: EV2534US.DAT
  TIME/DATE OF STUDY: 13:30 08/10/2023


                         ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   62698.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.581 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.286; LOW LOSS FRACTION = 0.449
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.40; 30-MINUTE =  0.77;  1-HOUR =  1.05
    3-HOUR =  1.93;    6-HOUR =  2.83; 24-HOUR =  4.96
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936
============================================================================
```



```
 +--------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV2534US.DAT   ]
Page:   1 of    |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0     16173.5|
18.167 |             |           |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                           |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                   |
 +--------------------------------------------------------------------------
-----------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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                           Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133C                                 *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
* 50-YR EV DEC 2022 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV5033CS.DAT
  TIME/DATE OF STUDY: 15:52 12/12/2022


                          ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   60992.301 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.287; LOW LOSS FRACTION = 0.416
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.44; 30-MINUTE =  0.86;  1-HOUR =  1.18
    3-HOUR =  2.18;    6-HOUR =  3.22; 24-HOUR =  5.64
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.308; 30-MINUTE = 0.363;  1-HOUR = 0.408
    3-HOUR = 0.754;    6-HOUR = 0.891; 24-HOUR = 0.936
============================================================================
```



```
 +--------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV5033CS.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0     19134.8|
18.000 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                               |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                       |
 +--------------------------------------------------------------------------
-----------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 133T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 50-YR EV OCT 2022 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV5033TS.DAT
  TIME/DATE OF STUDY: 10:12 10/25/2022


******************************************************************************
  FLOW PROCESS FROM NODE  13010.00 TO NODE    133.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    6638.200 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.153 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.239
         LOW LOSS FRACTION = 0.498
         *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 = 0.744
          30-MINUTE FACTOR = 0.744
           1-HOUR FACTOR = 0.744
           3-HOUR FACTOR = 0.959
           6-HOUR FACTOR = 0.978
          24-HOUR FACTOR = 0.987

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   7.228
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.413	331.560
2	1.239	663.121
3	2.137	721.054
4	3.356	978.393
5	5.133	1426.859
6	7.983	2288.048
7	11.614	2914.856
8	15.758	3326.584
9	19.933	3351.536
10	24.730	3851.310
11	29.303	3671.315
12	34.911	4502.392
13	40.486	4475.615
14	47.306	5474.580
15	53.455	4936.583
16	59.046	4488.520
17	65.258	4987.378
18	70.297	4045.121
19	74.847	3652.966
20	78.416	2865.428
21	81.693	2630.469
22	84.712	2423.833
23	87.186	1985.814
24	89.082	1522.040
25	90.700	1299.019
26	92.191	1197.437
27	93.569	1105.667
28	94.636	856.829
29	95.554	736.750
30	96.291	592.263
31	96.858	454.936
32	97.425	455.150
33	97.941	414.150
34	98.134	154.795
35	98.269	108.687
36	98.404	108.797
37	98.540	108.693
38	98.675	108.687
39	98.811	108.907
40	98.947	108.907
41	99.082	108.693
42	99.217	108.693
43	99.353	108.693
44	99.488	108.693
45	99.624	108.693
46	99.759	108.693
47	99.894	108.693
48	100.000	84.836

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 1016.1733

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1231.5459

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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.	875.0	1750.0	2625.0	3500.0
0.083	0.0061	0.88	Q	.	.	.	.
0.167	0.0243	2.65	Q	.	.	.	.
0.250	0.0558	4.57	Q	.	.	.	.
0.333	0.1053	7.19	Q	.	.	.	.
0.417	0.1812	11.01	Q	.	.	.	.
0.500	0.2991	17.13	Q	.	.	.	.
0.583	0.4709	24.94	Q	.	.	.	.
0.667	0.7041	33.87	Q	.	.	.	.
0.750	0.9995	42.89	Q	.	.	.	.
0.833	1.3664	53.27	Q	.	.	.	.
0.917	1.8017	63.21	Q	.	.	.	.
1.000	2.3210	75.39	Q	.	.	.	.
1.083	2.9239	87.54	VQ	.	.	.	.
1.167	3.6291	102.40	VQ	.	.	.	.
1.250	4.4270	115.86	VQ	.	.	.	.
1.333	5.3099	128.19	VQ	.	.	.	.
1.417	6.2870	141.88	VQ	.	.	.	.
1.500	7.3415	153.11	VQ	.	.	.	.
1.583	8.4664	163.34	VQ	.	.	.	.
1.667	9.6476	171.52	VQ	.	.	.	.
1.750	10.8811	179.09	V Q	.	.	.	.
1.833	12.1631	186.15	V Q	.	.	.	.
1.917	13.4859	192.07	V Q	.	.	.	.
2.000	14.8411	196.78	V Q	.	.	.	.
2.083	16.2247	200.91	V Q	.	.	.	.
2.167	17.6352	204.79	V Q	.	.	.	.
2.250	19.0707	208.45	V Q	.	.	.	.
2.333	20.5271	211.46	V Q	.	.	.	.
2.417	22.0020	214.16	V Q	.	.	.	.
2.500	23.4930	216.50	V Q	.	.	.	.
2.583	24.9976	218.47	V Q	.	.	.	.
2.667	26.5160	220.47	V Q	.	.	.	.
2.750	28.0474	222.36	V Q	.	.	.	.
2.833	29.5872	223.58	V Q	.	.	.	.
2.917	31.1346	224.68	.VQ	.	.	.	.
3.000	32.6896	225.79	.VQ	.	.	.	.
3.083	34.2524	226.91	.VQ	.	.	.	.
3.167	35.8229	228.04	.VQ	.	.	.	.
3.250	37.4012	229.18	.VQ	.	.	.	.
3.333	38.9875	230.33	.VQ	.	.	.	.
3.417	40.5817	231.48	.VQ	.	.	.	.
3.500	42.1840	232.65	.VQ	.	.	.	.
3.583	43.7943	233.82	.VQ	.	.	.	.
3.667	45.4128	235.01	.VQ	.	.	.	.
3.750	47.0395	236.20	.VQ	.	.	.	.
3.833	48.6746	237.41	.VQ	.	.	.	.
3.917	50.3180	238.62	.VQ	.	.	.	.

4.000	51.9694	239.79	.VQ	.	.	.	.
4.083	53.6273	240.73	.VQ	.	.	.	.
4.167	55.2919	241.69	.VQ	.	.	.	.
4.250	56.9630	242.65	.VQ	.	.	.	.
4.333	58.6410	243.63	.VQ	.	.	.	.
4.417	60.3257	244.62	.VQ	.	.	.	.
4.500	62.0173	245.62	. Q	.	.	.	.
4.583	63.7158	246.63	. Q	.	.	.	.
4.667	65.4214	247.65	. Q	.	.	.	.
4.750	67.1340	248.68	. Q	.	.	.	.
4.833	68.8539	249.72	. Q	.	.	.	.
4.917	70.5809	250.77	. Q	.	.	.	.
5.000	72.3153	251.84	. Q	.	.	.	.
5.083	74.0572	252.91	. Q	.	.	.	.
5.167	75.8065	254.00	. Q	.	.	.	.
5.250	77.5634	255.10	. Q	.	.	.	.
5.333	79.3280	256.22	. Q	.	.	.	.
5.417	81.1003	257.34	. Q	.	.	.	.
5.500	82.8805	258.48	. Q	.	.	.	.
5.583	84.6686	259.63	. Q	.	.	.	.
5.667	86.4648	260.80	. Q	.	.	.	.
5.750	88.2691	261.98	. Q	.	.	.	.
5.833	90.0816	263.18	. VQ	.	.	.	.
5.917	91.9024	264.38	. VQ	.	.	.	.
6.000	93.7316	265.61	. Q	.	.	.	.
6.083	95.5694	266.84	. Q	.	.	.	.
6.167	97.4158	268.10	. Q	.	.	.	.
6.250	99.2709	269.36	. Q	.	.	.	.
6.333	101.1349	270.65	. Q	.	.	.	.
6.417	103.0078	271.95	. Q	.	.	.	.
6.500	104.8898	273.27	. Q	.	.	.	.
6.583	106.7810	274.60	. Q	.	.	.	.
6.667	108.6815	275.95	. Q	.	.	.	.
6.750	110.5913	277.31	. Q	.	.	.	.
6.833	112.5108	278.70	. Q	.	.	.	.
6.917	114.4399	280.10	. Q	.	.	.	.
7.000	116.3788	281.53	. Q	.	.	.	.
7.083	118.3276	282.97	. Q	.	.	.	.
7.167	120.2865	284.43	. Q	.	.	.	.
7.250	122.2556	285.91	. Q	.	.	.	.
7.333	124.2350	287.41	. QV	.	.	.	.
7.417	126.2249	288.93	. QV	.	.	.	.
7.500	128.2254	290.48	. QV	.	.	.	.
7.583	130.2367	292.04	. QV	.	.	.	.
7.667	132.2589	293.63	. QV	.	.	.	.
7.750	134.2922	295.23	. QV	.	.	.	.
7.833	136.3368	296.87	. QV	.	.	.	.
7.917	138.3927	298.52	. QV	.	.	.	.
8.000	140.4603	300.21	. QV	.	.	.	.
8.083	142.5396	301.91	. QV	.	.	.	.
8.167	144.6308	303.65	. QV	.	.	.	.
8.250	146.7341	305.40	. QV	.	.	.	.
8.333	148.8497	307.19	. QV	.	.	.	.
8.417	150.9778	308.99	. QV	.	.	.	.
8.500	153.1186	310.84	. QV	.	.	.	.
8.583	155.2722	312.70	. Q V	.	.	.	.
8.667	157.4389	314.61	. Q V	.	.	.	.
8.750	159.6189	316.53	. Q V	.	.	.	.

8.833	161.8124	318.50	. Q V	.	.	.	.
8.917	164.0195	320.48	. Q V	.	.	.	.
9.000	166.2407	322.51	. Q V	.	.	.	.
9.083	168.4760	324.57	. Q V	.	.	.	.
9.167	170.7258	326.67	. Q V	.	.	.	.
9.250	172.9902	328.79	. Q V	.	.	.	.
9.333	175.2695	330.96	. Q V	.	.	.	.
9.417	177.5640	333.16	. Q V	.	.	.	.
9.500	179.8740	335.41	. Q V	.	.	.	.
9.583	182.1996	337.68	. Q V	.	.	.	.
9.667	184.5413	340.01	. Q V	.	.	.	.
9.750	186.8992	342.37	. Q V	.	.	.	.
9.833	189.2738	344.79	. Q V	.	.	.	.
9.917	191.6652	347.23	. Q V	.	.	.	.
10.000	194.0739	349.74	. Q V	.	.	.	.
10.083	196.5001	352.28	. Q V	.	.	.	.
10.167	198.9442	354.89	. Q V	.	.	.	.
10.250	201.4065	357.53	. Q V	.	.	.	.
10.333	203.8875	360.24	. Q V	.	.	.	.
10.417	206.3874	362.98	. Q V	.	.	.	.
10.500	208.9066	365.80	. Q V	.	.	.	.
10.583	211.4456	368.66	. Q V	.	.	.	.
10.667	214.0048	371.59	. Q V	.	.	.	.
10.750	216.5845	374.57	. Q V	.	.	.	.
10.833	219.1853	377.64	. Q V	.	.	.	.
10.917	221.8075	380.75	. Q V	.	.	.	.
11.000	224.4518	383.94	. Q V	.	.	.	.
11.083	227.1184	387.19	. Q V	.	.	.	.
11.167	229.8080	390.53	. Q V	.	.	.	.
11.250	232.5211	393.93	. Q V	.	.	.	.
11.333	235.2582	397.43	. Q V	.	.	.	.
11.417	238.0198	400.99	. Q V	.	.	.	.
11.500	240.8067	404.66	. Q V	.	.	.	.
11.583	243.6193	408.39	. Q V	.	.	.	.
11.667	246.4583	412.24	. Q V	.	.	.	.
11.750	249.3244	416.15	. Q V	.	.	.	.
11.833	252.2184	420.20	. Q V	.	.	.	.
11.917	255.1407	424.32	. Q V	.	.	.	.
12.000	258.0923	428.58	. Q V	.	.	.	.
12.083	261.0788	433.63	. Q V	.	.	.	.
12.167	264.1060	439.54	. Q V	.	.	.	.
12.250	267.1753	445.67	. Q V	.	.	.	.
12.333	270.2918	452.52	. Q V	.	.	.	.
12.417	273.4628	460.43	. Q V	.	.	.	.
12.500	276.7021	470.35	. Q V	.	.	.	.
12.583	280.0200	481.75	. Q V.	.	.	.	.
12.667	283.4237	494.23	. Q V.	.	.	.	.
12.750	286.9148	506.90	. Q V.	.	.	.	.
12.833	290.5021	520.88	. Q V.	.	.	.	.
12.917	294.1841	534.62	. Q V.	.	.	.	.
13.000	297.9747	550.40	. Q V.	.	.	.	.
13.083	301.8748	566.30	. Q V.	.	.	.	.
13.167	305.9011	584.61	. Q V.	.	.	.	.
13.250	310.0469	601.97	. Q V	.	.	.	.
13.333	314.3080	618.70	. Q V	.	.	.	.
13.417	318.6930	636.71	. Q V	.	.	.	.
13.500	323.1906	653.05	. Q V	.	.	.	.
13.583	327.7967	668.80	. Q V	.	.	.	.

13.667	332.5022	683.25	. Q V . . .
13.750	337.3057	697.46	. Q V . . .
13.833	342.2068	711.65	. Q .V . . .
13.917	347.2014	725.21	. Q .V . . .
14.000	352.2857	738.24	. Q .V . . .
14.083	357.4698	752.73	. Q .V . . .
14.167	362.7666	769.10	. Q .V . . .
14.250	368.1792	785.91	. Q .V . . .
14.333	373.7164	804.00	. Q. V . . .
14.417	379.3940	824.39	. Q. V . . .
14.500	385.2426	849.21	. Q. V . . .
14.583	391.2838	877.17	. Q V . . .
14.667	397.5356	907.76	. Q V . . .
14.750	404.0015	938.85	. Q V . . .
14.833	410.6993	972.53	. .Q V . . .
14.917	417.6263	1005.79	. .Q V . . .
15.000	424.8157	1043.91	. .Q V . . .
15.083	432.2728	1082.77	. . Q V . . .
15.167	440.0397	1127.75	. . Q V . . .
15.250	448.1073	1171.42	. . QV . . .
15.333	456.4736	1214.78	. . QV . . .
15.417	465.1393	1258.26	. . QV . . .
15.500	474.0640	1295.86	. . QV . . .
15.583	483.2502	1333.84	. . Q . . .
15.667	492.6779	1368.90	. . QV . . .
15.750	502.3381	1402.67	. . Q . . .
15.833	512.2044	1432.58	. . Q . . .
15.917	522.2888	1464.26	. . Q . . .
16.000	532.6876	1509.90	. . Q . . .
16.083	543.9142	1630.10	. . VQ . . .
16.167	555.9641	1749.64	. . VQ. . .
16.250	568.5558	1828.32	. . V Q . .
16.333	582.0397	1957.87	. . V . Q . .
16.417	596.8431	2149.45	. . V. Q . .
16.500	613.4393	2409.76	. . V. Q . .
16.583	631.3632	2602.55	. . V Q. .
16.667	650.2018	2735.38	. . .V .Q .
16.750	669.3168	2775.50	. . .V .Q .
16.833	689.4313	2920.63	. . . V . Q .
16.917	709.7371	2948.39	. . . V . Q .
17.000	731.5887	3172.87	. . . V . Q .
17.083	753.7737	3221.25	. . . V . Q .
17.167	777.2701	3411.67	. . . V . Q .
17.250	799.8107	3272.90	. . . V . Q .
17.333	821.4713	3145.10	. . . V . Q .
17.417	843.2782	3166.37	. . . V . Q .
17.500	863.2065	2893.59	. . . V . Q .
17.583	881.8264	2703.60	. . . V Q .
17.667	898.6975	2449.69	. . . Q V. .
17.750	914.6903	2322.15	. . . Q V. .
17.833	929.7641	2188.71	. . . Q V .
17.917	943.6025	2009.34	. . . Q V .
18.000	956.1693	1824.70	. . Q .V .
18.083	967.8914	1702.05	. . Q. .V .
18.167	978.9662	1608.07	. . Q . .V .
18.250	989.3998	1514.95	. . Q . . V .
18.333	998.9830	1391.49	. . Q . . V .
18.417	1007.8851	1292.59	. . Q . . V .

18.500	1016.1315	1197.37	. . Q . . V .
18.583	1023.7831	1111.03	. . Q . . V .
18.667	1031.0360	1053.12	. . Q . . V .
18.750	1037.8219	985.30	. .Q . . V .
18.833	1043.8790	879.50	. Q . . V .
18.917	1049.5631	825.33	. Q. . . V .
19.000	1054.9932	788.45	. Q. . . V .
19.083	1060.1958	755.42	. Q . . . V .
19.167	1065.1503	719.39	. Q . . . V .
19.250	1069.8757	686.13	. Q . . . V .
19.333	1074.3987	656.74	. Q . . . V .
19.417	1078.7301	628.92	. Q . . . V .
19.500	1082.8948	604.71	. Q . . . V .
19.583	1086.9075	582.64	. Q . . . V .
19.667	1090.7830	562.72	. Q . . . V .
19.750	1094.5255	543.42	. Q . . . V .
19.833	1098.1444	525.46	. Q . . . V .
19.917	1101.6354	506.90	. Q . . . V .
20.000	1104.9647	483.43	. Q . . . V .
20.083	1108.0697	450.84	. Q . . . V .
20.167	1111.0846	437.76	. Q . . . V .
20.250	1114.0250	426.95	. Q . . . V .
20.333	1116.8977	417.11	. Q . . . V .
20.417	1119.7009	407.04	. Q . . . V .
20.500	1122.4410	397.86	. Q . . . V .
20.583	1125.1233	389.46	. Q . . . V .
20.667	1127.7502	381.43	. Q . . . V .
20.750	1130.3246	373.80	. Q . . . V .
20.833	1132.8522	367.00	. Q . . . V .
20.917	1135.3353	360.56	. Q . . . V .
21.000	1137.7766	354.47	. Q . . . V .
21.083	1140.1803	349.02	. Q . . . V .
21.167	1142.5479	343.77	. Q . . . V .
21.250	1144.8806	338.72	. Q . . . V .
21.333	1147.1799	333.86	. Q . . . V .
21.417	1149.4469	329.17	. Q . . . V .
21.500	1151.6827	324.64	. Q . . . V .
21.583	1153.8883	320.26	. Q . . . V .
21.667	1156.0647	316.02	. Q . . . V .
21.750	1158.2129	311.92	. Q . . . V .
21.833	1160.3337	307.94	. Q . . . V .
21.917	1162.4280	304.09	. Q . . . V .
22.000	1164.4968	300.40	. Q . . . V .
22.083	1166.5422	297.00	. Q . . . V .
22.167	1168.5649	293.70	. Q . . . V .
22.250	1170.5656	290.49	. Q . . . V .
22.333	1172.5448	287.38	. Q . . . V .
22.417	1174.5032	284.36	. Q . . . V .
22.500	1176.4413	281.42	. Q . . . V .
22.583	1178.3597	278.55	. Q . . . V .
22.667	1180.2590	275.77	. Q . . . V .
22.750	1182.1396	273.06	. Q . . . V .
22.833	1184.0020	270.42	. Q . . . V .
22.917	1185.8466	267.84	. Q . . . V .
23.000	1187.6740	265.33	. Q . . . V .
23.083	1189.4844	262.88	. Q . . . V .
23.167	1191.2783	260.49	. Q . . . V .
23.250	1193.0563	258.15	. Q . . . V .

23.333	1194.8185	255.87	. Q	.	.	.	V	.
23.417	1196.5653	253.65	. Q	.	.	.	V	.
23.500	1198.2972	251.47	. Q	.	.	.	V	.
23.583	1200.0145	249.34	. Q	.	.	.	V	.
23.667	1201.7174	247.26	. Q	.	.	.	V.	
23.750	1203.4062	245.23	. Q	.	.	.	V.	
23.833	1205.0814	243.23	. Q	.	.	.	V.	
23.917	1206.7432	241.28	. Q	.	.	.	V.	
24.000	1208.3917	239.37	. Q	.	.	.	V.	
24.083	1210.0214	236.62	. Q	.	.	.	V.	
24.167	1211.6263	233.04	. Q	.	.	.	V.	
24.250	1213.2058	229.35	. Q	.	.	.	V.	
24.333	1214.7555	225.02	. Q	.	.	.	V.	
24.417	1216.2676	219.55	. Q	.	.	.	V.	
24.500	1217.7266	211.85	. Q	.	.	.	V.	
24.583	1219.1216	202.56	. Q	.	.	.	V.	
24.667	1220.4457	192.26	. Q	.	.	.	V.	
24.750	1221.6990	181.97	. Q	.	.	.	V.	
24.833	1222.8728	170.44	.Q	.	.	.	V.	
24.917	1223.9712	159.48	.Q	.	.	.	V.	
25.000	1224.9795	146.40	.Q	.	.	.	V.	
25.083	1225.8988	133.48	.Q	.	.	.	V.	
25.167	1226.7115	118.01	.Q	.	.	.	V.	
25.250	1227.4283	104.08	.Q	.	.	.	V.	
25.333	1228.0581	91.44	.Q	.	.	.	V.	
25.417	1228.5923	77.56	Q	.	.	.	V.	
25.500	1229.0488	66.28	Q	.	.	.	V.	
25.583	1229.4353	56.12	Q	.	.	.	V.	
25.667	1229.7667	48.13	Q	.	.	.	V.	
25.750	1230.0477	40.81	Q	.	.	.	V.	
25.833	1230.2825	34.09	Q	.	.	.	V.	
25.917	1230.4794	28.58	Q	.	.	.	V.	
26.000	1230.6470	24.34	Q	.	.	.	V.	
26.083	1230.7897	20.73	Q	.	.	.	V.	
26.167	1230.9095	17.40	Q	.	.	.	V.	
26.250	1231.0083	14.35	Q	.	.	.	V.	
26.333	1231.0907	11.97	Q	.	.	.	V.	
26.417	1231.1591	9.93	Q	.	.	.	V.	
26.500	1231.2162	8.29	Q	.	.	.	V.	
26.583	1231.2645	7.03	Q	.	.	.	V.	
26.667	1231.3042	5.77	Q	.	.	.	V.	
26.750	1231.3361	4.63	Q	.	.	.	V.	
26.833	1231.3649	4.19	Q	.	.	.	V.	
26.917	1231.3915	3.87	Q	.	.	.	V.	
27.000	1231.4159	3.55	Q	.	.	.	V.	
27.083	1231.4382	3.24	Q	.	.	.	V.	
27.167	1231.4584	2.93	Q	.	.	.	V.	
27.250	1231.4764	2.62	Q	.	.	.	V.	
27.333	1231.4923	2.31	Q	.	.	.	V.	
27.417	1231.5061	2.01	Q	.	.	.	V.	
27.500	1231.5178	1.71	Q	.	.	.	V.	
27.583	1231.5275	1.41	Q	.	.	.	V.	
27.667	1231.5352	1.11	Q	.	.	.	V.	
27.750	1231.5408	0.81	Q	.	.	.	V.	
27.833	1231.5443	0.52	Q	.	.	.	V.	
27.917	1231.5459	0.23	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%	1675.0
10%	690.0
20%	340.0
30%	225.0
40%	165.0
50%	115.0
60%	90.0
70%	75.0
80%	55.0
90%	30.0

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END OF FLOODSCx ROUTING ANALYSIS

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____________________________________________________________________________
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                           Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
 * RMV PA-3 ROMP AMENDMENT 2022 - NODE 133U                                *
 * PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL              *
 * 50-YR EV DEC 2022 ROKAMOTO                                              *
 **************************************************************************

  FILE NAME: EV5033US.DAT
  TIME/DATE OF STUDY: 15:51 12/12/2022


                          ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    133.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   54354.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.381 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.293; LOW LOSS FRACTION = 0.407
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.45; 30-MINUTE =  0.87;  1-HOUR =  1.20
    3-HOUR =  2.23;    6-HOUR =  3.31; 24-HOUR =  5.82
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.328; 30-MINUTE = 0.381;  1-HOUR = 0.422
    3-HOUR = 0.771;    6-HOUR = 0.897; 24-HOUR = 0.940
============================================================================
```



```
 +--------------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV5033US.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     133.00| Subarea (UH) Added to Stream #1|       0.0     18076.5|
18.000 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                          |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                  |
 +--------------------------------------------------------------------------------
-----------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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             Ver. 17.0  Release Date: 07/01/2010  License ID 1527

                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134C                              *
* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 50-YR EV AUG 2023 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV5034CS.DAT
  TIME/DATE OF STUDY: 13:25 08/10/2023


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   66557.602 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.480 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.286; LOW LOSS FRACTION = 0.417
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.44; 30-MINUTE =  0.85;  1-HOUR =  1.17
    3-HOUR =  2.15;    6-HOUR =  3.16; 24-HOUR =  5.51
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.294; 30-MINUTE = 0.352;  1-HOUR = 0.397
    3-HOUR = 0.741;    6-HOUR = 0.887; 24-HOUR = 0.933
==========================================================================
```



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 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV5034CS.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0     20052.1|
18.083 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134T                              *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL            *
* 50-YR EV OCT 2022 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV5034TS.DAT
  TIME/DATE OF STUDY: 10:11 10/25/2022


******************************************************************************
  FLOW PROCESS FROM NODE  13500.00 TO NODE    134.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =    3859.700 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    1.294 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284
         LOW LOSS FRACTION = 0.431
         *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 = 0.828
          30-MINUTE FACTOR = 0.828
           1-HOUR FACTOR = 0.828
           3-HOUR FACTOR = 0.974
           6-HOUR FACTOR = 0.987
          24-HOUR FACTOR = 0.992

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   6.440

Date: 05/18/2023        File name: EV5034TS.RES                 Page 1
```

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

------------------------------------------------------------------------------
    INTERVAL          "S" GRAPH          UNIT HYDROGRAPH
     NUMBER          MEAN VALUES          ORDINATES(CFS)
------------------------------------------------------------------------------
       1                0.368               171.775
       2                1.104               343.551
       3                1.855               350.708
       4                2.877               476.670
       5                4.113               577.004
       6                6.145               948.446
       7                9.003              1334.511
       8               12.275              1527.052
       9               16.108              1789.284
      10               19.769              1708.620
      11               24.068              2007.088
      12               28.051              1859.141
      13               32.847              2238.747
      14               37.674              2252.826
      15               43.292              2622.539
      16               49.468              2882.823
      17               54.488              2343.198
      18               59.648              2408.494
      19               65.190              2587.232
      20               69.701              2105.518
      21               73.826              1925.250
      22               77.314              1628.507
      23               80.204              1348.844
      24               83.085              1344.881
      25               85.601              1174.542
      26               87.656               958.971
      27               89.273               754.690
      28               90.705               668.617
      29               92.042               623.884
      30               93.282               578.795
      31               94.337               492.790
      32               95.157               382.441
      33               95.940               365.667
      34               96.489               256.376
      35               96.994               235.710
      36               97.499               235.849
      37               97.955               212.561
      38               98.122                77.935
      39               98.243                56.343
      40               98.364                56.485
      41               98.484                56.272
      42               98.605                56.272
      43               98.726                56.485
      44               98.846                56.204
      45               98.967                56.485
      46               99.088                56.343
      47               99.208                56.343
      48               99.329                56.343

Date: 05/18/2023        File name: EV5034TS.RES                 Page 2
```

49	99.450	56.343
50	99.571	56.343
51	99.691	56.343
52	99.812	56.343
53	99.933	56.343
54	100.000	31.421

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 519.9105
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 794.5671

==========

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.	525.0	1050.0	1575.0	2100.0
0.083	0.0036	0.52	Q	.	.	.	.
0.167	0.0143	1.55	Q	.	.	.	.
0.250	0.0323	2.62	Q	.	.	.	.
0.333	0.0603	4.06	Q	.	.	.	.
0.417	0.1003	5.81	Q	.	.	.	.
0.500	0.1602	8.69	Q	.	.	.	.
0.583	0.2479	12.74	Q	.	.	.	.
0.667	0.3676	17.38	Q	.	.	.	.
0.750	0.5249	22.83	Q	.	.	.	.
0.833	0.7181	28.06	Q	.	.	.	.
0.917	0.9536	34.20	Q	.	.	.	.
1.000	1.2285	39.91	Q	.	.	.	.
1.083	1.5507	46.79	Q	.	.	.	.
1.167	1.9208	53.74	VQ	.	.	.	.
1.250	2.3466	61.82	VQ	.	.	.	.
1.333	2.8336	70.71	VQ	.	.	.	.
1.417	3.3708	78.01	VQ	.	.	.	.
1.500	3.9599	85.53	VQ	.	.	.	.
1.583	4.6046	93.62	VQ	.	.	.	.
1.667	5.2952	100.28	VQ	.	.	.	.
1.750	6.0281	106.42	V Q	.	.	.	.
1.833	6.7973	111.69	V Q	.	.	.	.
1.917	7.5972	116.14	V Q	.	.	.	.
2.000	8.4276	120.59	V Q	.	.	.	.
2.083	9.2854	124.54	V Q	.	.	.	.
2.167	10.1660	127.86	V Q	.	.	.	.
2.250	11.0653	130.58	V Q	.	.	.	.
2.333	11.9817	133.05	V Q	.	.	.	.
2.417	12.9142	135.40	V Q	.	.	.	.
2.500	13.8620	137.62	V Q	.	.	.	.
2.583	14.8234	139.60	V Q	.	.	.	.
2.667	15.7962	141.25	V Q	.	.	.	.
2.750	16.7800	142.86	V Q	.	.	.	.
2.833	17.7728	144.14	V Q	.	.	.	.
2.917	18.7740	145.38	V Q	.	.	.	.
3.000	19.7837	146.61	V Q	.	.	.	.
3.083	20.8016	147.79	.VQ	.	.	.	.
3.167	21.8248	148.57	.VQ	.	.	.	.
3.250	22.8529	149.29	.VQ	.	.	.	.
3.333	23.8861	150.01	.VQ	.	.	.	.
3.417	24.9243	150.75	.VQ	.	.	.	.
3.500	25.9676	151.48	.VQ	.	.	.	.
3.583	27.0160	152.23	.VQ	.	.	.	.
3.667	28.0696	152.98	.VQ	.	.	.	.
3.750	29.1283	153.74	.VQ	.	.	.	.
3.833	30.1924	154.50	.VQ	.	.	.	.
3.917	31.2617	155.27	.VQ	.	.	.	.

4.000	32.3364	156.04	.VQ	.	.	.	.
4.083	33.4164	156.83	.VQ	.	.	.	.
4.167	34.5019	157.61	.V Q	.	.	.	.
4.250	35.5929	158.41	.V Q	.	.	.	.
4.333	36.6894	159.21	.V Q	.	.	.	.
4.417	37.7915	160.03	.V Q	.	.	.	.
4.500	38.8988	160.77	.V Q	.	.	.	.
4.583	40.0105	161.42	. VQ	.	.	.	.
4.667	41.1268	162.08	. VQ	.	.	.	.
4.750	42.2477	162.76	. VQ	.	.	.	.
4.833	43.3733	163.43	. VQ	.	.	.	.
4.917	44.5036	164.12	. VQ	.	.	.	.
5.000	45.6386	164.81	. VQ	.	.	.	.
5.083	46.7785	165.51	. VQ	.	.	.	.
5.167	47.9232	166.21	. VQ	.	.	.	.
5.250	49.0729	166.93	. VQ	.	.	.	.
5.333	50.2275	167.65	. VQ	.	.	.	.
5.417	51.3872	168.39	. VQ	.	.	.	.
5.500	52.5519	169.12	. VQ	.	.	.	.
5.583	53.7218	169.87	. VQ	.	.	.	.
5.667	54.8970	170.63	. VQ	.	.	.	.
5.750	56.0774	171.40	. VQ	.	.	.	.
5.833	57.2631	172.17	. VQ	.	.	.	.
5.917	58.4542	172.95	. VQ	.	.	.	.
6.000	59.6508	173.74	. Q	.	.	.	.
6.083	60.8530	174.55	. Q	.	.	.	.
6.167	62.0607	175.36	. Q	.	.	.	.
6.250	63.2741	176.18	. Q	.	.	.	.
6.333	64.4932	177.01	. Q	.	.	.	.
6.417	65.7181	177.86	. Q	.	.	.	.
6.500	66.9489	178.71	. Q	.	.	.	.
6.583	68.1856	179.58	. Q	.	.	.	.
6.667	69.4284	180.45	. Q	.	.	.	.
6.750	70.6773	181.34	. Q	.	.	.	.
6.833	71.9323	182.23	. Q	.	.	.	.
6.917	73.1936	183.15	. Q	.	.	.	.
7.000	74.4613	184.06	. Q	.	.	.	.
7.083	75.7354	185.00	. Q	.	.	.	.
7.167	77.0160	185.94	. Q	.	.	.	.
7.250	78.3032	186.90	. Q	.	.	.	.
7.333	79.5971	187.87	. QV	.	.	.	.
7.417	80.8978	188.86	. QV	.	.	.	.
7.500	82.2053	189.85	. QV	.	.	.	.
7.583	83.5199	190.87	. QV	.	.	.	.
7.667	84.8415	191.89	. QV	.	.	.	.
7.750	86.1702	192.94	. QV	.	.	.	.
7.833	87.5062	193.99	. QV	.	.	.	.
7.917	88.8497	195.06	. QV	.	.	.	.
8.000	90.2005	196.15	. QV	.	.	.	.
8.083	91.5590	197.25	. QV	.	.	.	.
8.167	92.9252	198.37	. QV	.	.	.	.
8.250	94.2992	199.51	. QV	.	.	.	.
8.333	95.6812	200.66	. QV	.	.	.	.
8.417	97.0712	201.83	. QV	.	.	.	.
8.500	98.4693	203.01	. QV	.	.	.	.
8.583	99.8758	204.22	. Q V	.	.	.	.
8.667	101.2908	205.44	. Q V	.	.	.	.
8.750	102.7143	206.69	. Q V	.	.	.	.

8.833	104.1465	207.95	. Q V	.	.	.	.
8.917	105.5875	209.24	. Q V	.	.	.	.
9.000	107.0376	210.54	. QV	.	.	.	.
9.083	108.4968	211.88	. QV	.	.	.	.
9.167	109.9652	213.22	. QV	.	.	.	.
9.250	111.4432	214.60	. QV	.	.	.	.
9.333	112.9307	215.99	. QV	.	.	.	.
9.417	114.4280	217.41	. QV	.	.	.	.
9.500	115.9353	218.85	. QV	.	.	.	.
9.583	117.4527	220.33	. QV	.	.	.	.
9.667	118.9803	221.81	. QV	.	.	.	.
9.750	120.5185	223.34	. Q V	.	.	.	.
9.833	122.0673	224.89	. Q V	.	.	.	.
9.917	123.6270	226.47	. Q V	.	.	.	.
10.000	125.1978	228.07	. Q V	.	.	.	.
10.083	126.7798	229.72	. Q V	.	.	.	.
10.167	128.3733	231.38	. Q V	.	.	.	.
10.250	129.9786	233.08	. Q V	.	.	.	.
10.333	131.5957	234.81	. Q V	.	.	.	.
10.417	133.2251	236.59	. Q V	.	.	.	.
10.500	134.8669	238.38	. Q V	.	.	.	.
10.583	136.5214	240.23	. Q V	.	.	.	.
10.667	138.1887	242.10	. Q V	.	.	.	.
10.750	139.8693	244.02	. Q V	.	.	.	.
10.833	141.5633	245.97	. Q V	.	.	.	.
10.917	143.2712	247.98	. Q V	.	.	.	.
11.000	144.9930	250.01	. Q V	.	.	.	.
11.083	146.7293	252.10	. Q V	.	.	.	.
11.167	148.4801	254.23	. Q V	.	.	.	.
11.250	150.2461	256.42	. Q V	.	.	.	.
11.333	152.0273	258.64	. Q V	.	.	.	.
11.417	153.8244	260.93	. Q V	.	.	.	.
11.500	155.6374	263.25	. Q V	.	.	.	.
11.583	157.4669	265.65	. Q V	.	.	.	.
11.667	159.3133	268.09	. Q V	.	.	.	.
11.750	161.1770	270.61	. Q V	.	.	.	.
11.833	163.0583	273.17	. Q V	.	.	.	.
11.917	164.9579	275.81	. Q V	.	.	.	.
12.000	166.8759	278.51	. Q V	.	.	.	.
12.083	168.8159	281.69	. Q V	.	.	.	.
12.167	170.7809	285.31	. Q V	.	.	.	.
12.250	172.7717	289.06	. Q V	.	.	.	.
12.333	174.7906	293.15	. Q V	.	.	.	.
12.417	176.8400	297.58	. Q V	.	.	.	.
12.500	178.9264	302.93	. Q V.	.	.	.	.
12.583	181.0565	309.29	. Q V.	.	.	.	.
12.667	183.2340	316.17	. Q V.	.	.	.	.
12.750	185.4640	323.79	. Q V.	.	.	.	.
12.833	187.7458	331.32	. Q V.	.	.	.	.
12.917	190.0851	339.68	. Q V.	.	.	.	.
13.000	192.4805	347.80	. Q V.	.	.	.	.
13.083	194.9389	356.96	. Q V.	.	.	.	.
13.167	197.4613	366.26	. Q V.	.	.	.	.
13.250	200.0550	376.60	. Q V	.	.	.	.
13.333	202.7248	387.66	. Q V	.	.	.	.
13.417	205.4638	397.69	. Q V	.	.	.	.
13.500	208.2738	408.02	. Q V	.	.	.	.
13.583	211.1593	418.97	. Q V	.	.	.	.

13.667	214.1138	428.99	. Q V . . .
13.750	217.1361	438.84	. Q V . . .
13.833	220.2228	448.19	. Q .V . . .
13.917	223.3713	457.17	. Q .V . . .
14.000	226.5831	466.34	. Q .V . . .
14.083	229.8615	476.04	. Q.V . . .
14.167	233.2091	486.06	. Q.V . . .
14.250	236.6250	495.99	. Q.V . . .
14.333	240.1128	506.42	. Q. V . . .
14.417	243.6768	517.49	. Q. V . . .
14.500	247.3273	530.06	. Q V . . .
14.583	251.0755	544.23	. Q V . . .
14.667	254.9264	559.16	. Q V . . .
14.750	258.8897	575.48	. Q V . . .
14.833	262.9644	591.65	. .Q V . . .
14.917	267.1616	609.42	. .Q V . . .
15.000	271.4807	627.15	. .Q V . . .
15.083	275.9357	646.86	. . QV . . .
15.167	280.5288	666.91	. . Q V . . .
15.250	285.2745	689.08	. . QV . . .
15.333	290.1844	712.91	. . QV . . .
15.417	295.2424	734.42	. . QV . . .
15.500	300.4465	755.64	. . QV . . .
15.583	305.8111	778.95	. . QV . . .
15.667	311.3272	800.93	. . Q . . .
15.750	317.0020	823.97	. . Q . . .
15.833	322.8257	845.60	. . Q . . .
15.917	328.8121	869.23	. . Q . . .
16.000	335.0248	902.09	. . VQ . . .
16.083	341.7368	974.58	. . VQ . . .
16.167	348.9438	1046.45	. . V Q. . .
16.250	356.4006	1082.73	. . V Q . .
16.333	364.3454	1153.58	. . V .Q . .
16.417	372.8332	1232.43	. . V . Q . .
16.500	382.3028	1374.98	. . V. Q . .
16.583	392.7105	1511.20	. . V. Q . .
16.667	403.6558	1589.26	. . V Q .
16.750	415.1931	1675.21	. . V .Q .
16.833	426.7850	1683.14	. . .V . Q .
16.917	438.9674	1768.90	. . . V . Q .
17.000	451.1451	1768.19	. . . V . Q .
17.083	464.0944	1880.24	. . . V . Q .
17.167	477.2867	1915.53	. . . V . Q .
17.250	491.1438	2012.04	. . . V . Q .
17.333	505.2489	2048.07	. . . V . Q.
17.417	518.4039	1910.10	. . . V . Q .
17.500	531.4771	1898.22	. . . V . Q .
17.583	544.5169	1893.39	. . . V . Q .
17.667	556.4719	1735.87	. . . V . Q .
17.750	567.7141	1632.36	. . . V .Q .
17.833	578.1108	1509.60	. . . QV. .
17.917	587.7606	1401.16	. . . Q V. .
18.000	597.0652	1351.03	. . . Q V .
18.083	605.7384	1259.34	. . . Q V .
18.167	613.7081	1157.20	. . . Q V .
18.250	621.0247	1062.36	. . Q .V .
18.333	627.9118	1000.01	. . Q. .V .
18.417	634.4639	951.36	. . Q . .V .

18.500	640.6663	900.60	. . Q . . V .
18.583	646.4436	838.87	. . Q . . V .
18.667	651.7837	775.38	. . Q . . V .
18.750	656.8375	733.82	. . Q . . V .
18.833	661.5013	677.19	. . Q . . V .
18.917	665.9308	643.15	. . Q . . V .
19.000	670.1517	612.89	. .Q . . V .
19.083	674.1130	575.18	. Q . . V .
19.167	677.6711	516.63	. Q. . . V .
19.250	681.0276	487.35	. Q. . . V .
19.333	684.2384	466.21	. Q . . . V .
19.417	687.3236	447.97	. Q . . . V .
19.500	690.2831	429.72	. Q . . . V .
19.583	693.1212	412.08	. Q . . . V .
19.667	695.8523	396.56	. Q . . . V .
19.750	698.4847	382.23	. Q . . . V .
19.833	701.0302	369.59	. Q . . . V .
19.917	703.4985	358.41	. Q . . . V .
20.000	705.8923	347.58	. Q . . . V .
20.083	708.2167	337.50	. Q . . . V .
20.167	710.4794	328.55	. Q . . . V .
20.250	712.6844	320.17	. Q . . . V .
20.333	714.8304	311.59	. Q . . . V .
20.417	716.9101	301.97	. Q . . . V .
20.500	718.8856	286.84	. Q . . . V .
20.583	720.7581	271.88	. Q . . . V .
20.667	722.5857	265.38	. Q . . . V .
20.750	724.3746	259.75	. Q . . . V .
20.833	726.1276	254.54	. Q . . . V .
20.917	727.8453	249.41	. Q . . . V .
21.000	729.5294	244.52	. Q . . . V .
21.083	731.1816	239.90	. Q . . . V .
21.167	732.8054	235.79	. Q . . . V .
21.250	734.4025	231.89	. Q . . . V .
21.333	735.9737	228.14	. Q . . . V .
21.417	737.5201	224.54	. Q . . . V .
21.500	739.0433	221.16	. Q . . . V .
21.583	740.5447	218.01	. Q . . . V .
21.667	742.0253	214.98	. Q . . . V .
21.750	743.4858	212.06	. Q . . . V .
21.833	744.9268	209.23	. Q . . . V .
21.917	746.3489	206.50	. Q . . . V .
22.000	747.7529	203.86	. Q . . . V .
22.083	749.1393	201.30	. Q . . . V .
22.167	750.5085	198.81	. Q . . . V .
22.250	751.8612	196.41	. Q . . . V .
22.333	753.1978	194.07	. Q . . . V .
22.417	754.5187	191.80	. Q . . . V .
22.500	755.8248	189.65	. Q . . . V .
22.583	757.1171	187.63	. Q . . . V .
22.667	758.3958	185.67	. Q . . . V .
22.750	759.6614	183.77	. Q . . . V .
22.833	760.9143	181.91	. Q . . . V .
22.917	762.1547	180.11	. Q . . . V .
23.000	763.3830	178.35	. Q . . . V .
23.083	764.5995	176.64	. Q . . . V .
23.167	765.8045	174.97	. Q . . . V .
23.250	766.9983	173.34	. Q . . . V .

23.333	768.1812	171.75	.	Q	.	.	.	V .
23.417	769.3533	170.20	.	Q	.	.	.	V .
23.500	770.5151	168.68	.	Q	.	.	.	V .
23.583	771.6666	167.21	.	Q	.	.	.	V .
23.667	772.8082	165.76	.	Q	.	.	.	V .
23.750	773.9401	164.35	.	Q	.	.	.	V .
23.833	775.0625	162.97	.	Q	.	.	.	V.
23.917	776.1756	161.62	.	Q	.	.	.	V.
24.000	777.2796	160.30	.	Q	.	.	.	V.
24.083	778.3711	158.49	.	Q	.	.	.	V.
24.167	779.4468	156.19	.	Q	.	.	.	V.
24.250	780.5067	153.91	.	Q	.	.	.	V.
24.333	781.5486	151.28	.	Q	.	.	.	V.
24.417	782.5704	148.38	.	Q	.	.	.	V.
24.500	783.5649	144.39	.	Q	.	.	.	V.
24.583	784.5242	139.29	.	Q	.	.	.	V.
24.667	785.4446	133.66	.	Q	.	.	.	V.
24.750	786.3212	127.28	.	Q	.	.	.	V.
24.833	787.1559	121.20	.	Q	.	.	.	V.
24.917	787.9430	114.28	.	Q	.	.	.	V.
25.000	788.6858	107.86	.	Q	.	.	.	V.
25.083	789.3769	100.34	.	Q	.	.	.	V.
25.167	790.0164	92.85	.	Q	.	.	.	V.
25.250	790.5969	84.30	.	Q	.	.	.	V.
25.333	791.1136	75.02	.	Q	.	.	.	V.
25.417	791.5781	67.44	.	Q	.	.	.	V.
25.500	791.9894	59.72	.	Q	.	.	.	V.
25.583	792.3442	51.51	Q	.	.	.	.	V.
25.667	792.6528	44.82	Q	.	.	.	.	V.
25.750	792.9194	38.71	Q	.	.	.	.	V.
25.833	793.1504	33.54	Q	.	.	.	.	V.
25.917	793.3518	29.24	Q	.	.	.	.	V.
26.000	793.5239	24.99	Q	.	.	.	.	V.
26.083	793.6705	21.28	Q	.	.	.	.	V.
26.167	793.7961	18.25	Q	.	.	.	.	V.
26.250	793.9053	15.85	Q	.	.	.	.	V.
26.333	793.9998	13.73	Q	.	.	.	.	V.
26.417	794.0807	11.75	Q	.	.	.	.	V.
26.500	794.1491	9.93	Q	.	.	.	.	V.
26.583	794.2068	8.38	Q	.	.	.	.	V.
26.667	794.2562	7.17	Q	.	.	.	.	V.
26.750	794.2976	6.02	Q	.	.	.	.	V.
26.833	794.3334	5.20	Q	.	.	.	.	V.
26.917	794.3641	4.46	Q	.	.	.	.	V.
27.000	794.3897	3.72	Q	.	.	.	.	V.
27.083	794.4107	3.05	Q	.	.	.	.	V.
27.167	794.4299	2.79	Q	.	.	.	.	V.
27.250	794.4479	2.60	Q	.	.	.	.	V.
27.333	794.4645	2.42	Q	.	.	.	.	V.
27.417	794.4799	2.23	Q	.	.	.	.	V.
27.500	794.4940	2.05	Q	.	.	.	.	V.
27.583	794.5068	1.86	Q	.	.	.	.	V.
27.667	794.5184	1.68	Q	.	.	.	.	V.
27.750	794.5287	1.50	Q	.	.	.	.	V.
27.833	794.5378	1.32	Q	.	.	.	.	V.
27.917	794.5457	1.14	Q	.	.	.	.	V.
28.000	794.5524	0.96	Q	.	.	.	.	V.
28.083	794.5578	0.79	Q	.	.	.	.	V.

28.167	794.5620	0.61	Q	.	.	.	V.	
28.250	794.5651	0.44	Q	.	.	.	V.	
28.333	794.5669	0.27	Q	.	.	.	V.	
28.417	794.5676	0.10	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%	1705.0
10%	800.0
20%	365.0
30%	240.0
40%	175.0
50%	130.0
60%	105.0
70%	80.0
80%	60.0
90%	35.0

END OF FLOODSCx ROUTING ANALYSIS

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

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




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 134U                              *
* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 50-YR EV AUG 2023 ROKAMOTO                                            *
 ************************************************************************

  FILE NAME: EV5034US.DAT
  TIME/DATE OF STUDY: 13:26 08/10/2023


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    134.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   62698.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.480 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.286; LOW LOSS FRACTION = 0.417
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.44; 30-MINUTE =  0.86;  1-HOUR =  1.18
    3-HOUR =  2.17;    6-HOUR =  3.20; 24-HOUR =  5.59
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.304; 30-MINUTE = 0.358;  1-HOUR = 0.405
    3-HOUR = 0.750;    6-HOUR = 0.890; 24-HOUR = 0.936
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV5034US.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     134.00| Subarea (UH) Added to Stream #1|       0.0     19329.3|
18.083 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                        Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJJO - SINGLE AREA UH                                *
* PHASE CONDITION NO PA4&5 - REGIONAL NODE 119                          *
* 5-YR EV JAN 2019 FKAZI                                                *
 ************************************************************************

  FILE NAME: EV05119S.DAT
  TIME/DATE OF STUDY: 14:17 01/02/2019


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    119.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   49511.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    3.308 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.496
         LOW LOSS FRACTION = 0.845
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.23
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.44
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.62
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.15
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  1.71
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  3.02

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.345
          30-MINUTE FACTOR = 0.395
           1-HOUR FACTOR = 0.435
           3-HOUR FACTOR = 0.785
           6-HOUR FACTOR = 0.904
          24-HOUR FACTOR = 0.944

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   2.519
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.144	861.957
2	0.432	1723.910
3	0.720	1723.908
4	1.008	1723.917
5	1.296	1723.908
6	1.583	1723.912
7	1.872	1725.184
8	2.242	2220.213
9	2.680	2623.342
10	3.119	2623.338
11	3.557	2623.352
12	4.039	2885.904
13	4.797	4538.278
14	5.603	4827.015
15	6.538	5599.983
16	7.601	6363.772
17	8.835	7391.532
18	10.162	7944.164
19	11.427	7575.994
20	12.687	7542.120
21	14.025	8015.321
22	15.857	10966.284
23	17.296	8620.800
24	18.640	8044.918
25	20.023	8284.141
26	21.674	9880.575
27	23.579	11410.392
28	25.158	9453.616
29	26.597	8619.561
30	28.117	9095.994
31	30.019	11393.580
32	31.785	10569.825
33	34.046	13543.150
34	36.009	11753.075
35	37.423	8465.070
36	39.675	13488.021
37	41.987	13839.990
38	44.288	13781.676
39	46.590	13784.006
40	49.336	16442.947
41	51.473	12792.832
42	53.304	10963.412
43	55.042	10409.521
44	56.867	10925.403
45	58.980	12655.302
46	61.521	15212.119
47	63.774	13493.847
48	65.586	10847.079

49	67.261	10028.224
50	69.135	11224.265
51	70.855	10299.858
52	72.369	9063.205
53	73.992	9718.353
54	75.544	9292.444
55	76.797	7503.934
56	77.917	6704.243
57	79.037	6704.883
58	80.169	6783.778
59	81.351	7073.915
60	82.479	6758.241
61	83.540	6352.023
62	84.544	6009.625
63	85.504	5746.168
64	86.374	5212.310
65	87.149	4642.454
66	87.910	4553.051
67	88.535	3742.990
68	89.128	3549.155
69	89.721	3550.297
70	90.280	3351.848
71	90.811	3175.418
72	91.341	3175.418
73	91.869	3165.002
74	92.363	2957.233
75	92.843	2873.678
76	93.323	2873.678
77	93.802	2869.018
78	94.188	2311.953
79	94.509	1917.339
80	94.828	1915.009
81	95.148	1915.009
82	95.468	1915.009
83	95.788	1914.963
84	96.065	1659.683
85	96.264	1193.117
86	96.462	1183.844
87	96.660	1183.798
88	96.857	1181.514
89	97.054	1181.514
90	97.252	1186.128
91	97.450	1181.514
92	97.647	1181.468
93	97.845	1183.844
94	98.004	954.010
95	98.058	320.333
96	98.105	280.862
97	98.152	283.192
98	98.200	285.522
99	98.246	278.533
100	98.294	287.852
101	98.341	278.533
102	98.388	280.862
103	98.435	283.192
104	98.482	280.862
105	98.530	287.852
106	98.576	278.533

107	98.624	283.192
108	98.671	283.192
109	98.718	283.192
110	98.766	283.192
111	98.813	283.192
112	98.860	283.192
113	98.907	278.533
114	98.955	287.852
115	99.001	278.533
116	99.048	278.533
117	99.094	278.533
118	99.141	278.533
119	99.187	278.533
120	99.234	278.533
121	99.280	278.533
122	99.327	278.533
123	99.373	278.533
124	99.420	278.533
125	99.466	278.533
126	99.513	278.533
127	99.559	278.533
128	99.606	278.533
129	99.652	278.533
130	99.699	278.533
131	99.745	278.533
132	99.792	278.533
133	99.839	278.533
134	99.885	278.533
135	99.932	278.533
136	99.978	278.533
137	100.000	131.432

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 9838.6836

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 1927.5480

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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.	625.0	1250.0	1875.0	2500.0
0.083	0.0040	0.58	Q	.	.	.	.
0.167	0.0161	1.75	Q	.	.	.	.
0.250	0.0362	2.92	Q	.	.	.	.
0.333	0.0644	4.10	Q	.	.	.	.
0.417	0.1007	5.27	Q	.	.	.	.
0.500	0.1452	6.45	Q	.	.	.	.
0.583	0.1978	7.64	Q	.	.	.	.
0.667	0.2609	9.16	Q	.	.	.	.
0.750	0.3364	10.96	Q	.	.	.	.
0.833	0.4243	12.77	Q	.	.	.	.
0.917	0.5248	14.58	Q	.	.	.	.
1.000	0.6389	16.58	Q	.	.	.	.
1.083	0.7746	19.70	Q	.	.	.	.
1.167	0.9331	23.02	Q	.	.	.	.
1.250	1.1182	26.87	Q	.	.	.	.
1.333	1.3335	31.26	Q	.	.	.	.
1.417	1.5838	36.35	Q	.	.	.	.
1.500	1.8719	41.83	Q	.	.	.	.
1.583	2.1962	47.08	Q	.	.	.	.
1.667	2.5565	52.32	Q	.	.	.	.
1.750	2.9552	57.90	Q	.	.	.	.
1.833	3.4063	65.49	VQ	.	.	.	.
1.917	3.8988	71.52	VQ	.	.	.	.
2.000	4.4303	77.17	VQ	.	.	.	.
2.083	5.0020	83.01	VQ	.	.	.	.
2.167	5.6215	89.95	VQ	.	.	.	.
2.250	6.2959	97.93	VQ	.	.	.	.
2.333	7.0165	104.63	VQ	.	.	.	.
2.417	7.7794	110.78	VQ	.	.	.	.
2.500	8.5871	117.27	VQ	.	.	.	.
2.583	9.4503	125.34	V Q	.	.	.	.
2.667	10.3653	132.87	V Q	.	.	.	.
2.750	11.3463	142.44	V Q	.	.	.	.
2.833	12.3851	150.83	V Q	.	.	.	.
2.917	13.4665	157.02	V Q	.	.	.	.
3.000	14.6141	166.63	V Q	.	.	.	.
3.083	15.8298	176.51	V Q	.	.	.	.
3.167	17.1135	186.39	V Q	.	.	.	.
3.250	18.4653	196.29	V Q	.	.	.	.
3.333	19.8980	208.03	V Q	.	.	.	.
3.417	21.3948	217.33	V Q	.	.	.	.
3.500	22.9474	225.44	V Q	.	.	.	.
3.583	24.5534	233.19	V Q	.	.	.	.
3.667	26.2154	241.32	V Q	.	.	.	.
3.750	27.9416	250.65	V Q	.	.	.	.
3.833	29.7442	261.74	V Q	.	.	.	.
3.917	31.6154	271.70	V Q	.	.	.	.

4.000	33.5432	279.91	V Q	.	.	.	.
4.083	35.5238	287.59	V Q	.	.	.	.
4.167	37.5632	296.12	V Q	.	.	.	.
4.250	39.6572	304.04	V Q	.	.	.	.
4.333	41.8002	311.16	V Q	.	.	.	.
4.417	43.9954	318.75	V Q	.	.	.	.
4.500	46.2412	326.09	V Q	.	.	.	.
4.583	48.5293	332.23	.V Q	.	.	.	.
4.667	50.8562	337.87	.V Q	.	.	.	.
4.750	53.2221	343.53	.V Q	.	.	.	.
4.833	55.6275	349.26	.V Q	.	.	.	.
4.917	58.0739	355.22	.V Q	.	.	.	.
5.000	60.5601	360.99	.V Q	.	.	.	.
5.083	63.0842	366.50	.V Q	.	.	.	.
5.167	65.6449	371.82	.V Q	.	.	.	.
5.250	68.2411	376.97	.V Q	.	.	.	.
5.333	70.8705	381.79	.V Q	.	.	.	.
5.417	73.5306	386.24	.V Q	.	.	.	.
5.500	76.2211	390.67	.V Q	.	.	.	.
5.583	78.9385	394.56	.V Q	.	.	.	.
5.667	81.6819	398.34	.V Q	.	.	.	.
5.750	84.4514	402.14	.V Q	.	.	.	.
5.833	87.2465	405.84	.V Q	.	.	.	.
5.917	90.0662	409.43	.V Q	.	.	.	.
6.000	92.9109	413.04	.V Q	.	.	.	.
6.083	95.7805	416.67	.V Q	.	.	.	.
6.167	98.6743	420.18	. V Q	.	.	.	.
6.250	101.5920	423.65	. V Q	.	.	.	.
6.333	104.5338	427.15	. V Q	.	.	.	.
6.417	107.4997	430.66	. V Q	.	.	.	.
6.500	110.4875	433.82	. V Q	.	.	.	.
6.583	113.4953	436.73	. V Q	.	.	.	.
6.667	116.5233	439.67	. V Q	.	.	.	.
6.750	119.5716	442.62	. V Q	.	.	.	.
6.833	122.6405	445.60	. V Q	.	.	.	.
6.917	125.7300	448.59	. V Q	.	.	.	.
7.000	128.8391	451.44	. V Q	.	.	.	.
7.083	131.9658	453.99	. V Q	.	.	.	.
7.167	135.1102	456.57	. V Q	.	.	.	.
7.250	138.2724	459.16	. V Q	.	.	.	.
7.333	141.4527	461.77	. V Q	.	.	.	.
7.417	144.6510	464.40	. V Q	.	.	.	.
7.500	147.8678	467.07	. V Q	.	.	.	.
7.583	151.1029	469.75	. V Q	.	.	.	.
7.667	154.3568	472.46	. V Q	.	.	.	.
7.750	157.6294	475.18	. V Q	.	.	.	.
7.833	160.9199	477.79	. V Q	.	.	.	.
7.917	164.2256	479.98	. V Q	.	.	.	.
8.000	167.5464	482.18	. V Q	.	.	.	.
8.083	170.8825	484.40	. V Q	.	.	.	.
8.167	174.2341	486.65	. V Q	.	.	.	.
8.250	177.6013	488.92	. V Q	.	.	.	.
8.333	180.9844	491.22	. V Q	.	.	.	.
8.417	184.3835	493.54	. V Q	.	.	.	.
8.500	187.7987	495.90	. V Q	.	.	.	.
8.583	191.2303	498.27	. V Q	.	.	.	.
8.667	194.6785	500.68	. V Q	.	.	.	.
8.750	198.1435	503.11	. V Q	.	.	.	.

8.833	201.6255	505.58	.	V	Q	.	.	.	.
8.917	205.1246	508.07	.	V	Q	.	.	.	.
9.000	208.6412	510.61	.	V	Q	.	.	.	.
9.083	212.1753	513.16	.	V	Q	.	.	.	.
9.167	215.7273	515.75	.	V	Q	.	.	.	.
9.250	219.2973	518.37	.	V	Q	.	.	.	.
9.333	222.8857	521.03	.	V	Q	.	.	.	.
9.417	226.4926	523.71	.	V	Q	.	.	.	.
9.500	230.1183	526.45	.	V	Q	.	.	.	.
9.583	233.7629	529.20	.	V	Q	.	.	.	.
9.667	237.4268	532.00	.	V	Q	.	.	.	.
9.750	241.1102	534.83	.	V	Q	.	.	.	.
9.833	244.8135	537.71	.	V	Q	.	.	.	.
9.917	248.5367	540.61	.	V	Q	.	.	.	.
10.000	252.2803	543.57	.	V	Q	.	.	.	.
10.083	256.0445	546.56	.	V	Q	.	.	.	.
10.167	259.8296	549.60	.	V	Q	.	.	.	.
10.250	263.6359	552.67	.	V	Q	.	.	.	.
10.333	267.4637	555.80	.	V	Q	.	.	.	.
10.417	271.3133	558.96	.	V	Q	.	.	.	.
10.500	275.1852	562.19	.	V	Q	.	.	.	.
10.583	279.0794	565.44	.	V	Q.	.	.	.	.
10.667	282.9965	568.77	.	V	Q.	.	.	.	.
10.750	286.9368	572.12	.	V	Q.	.	.	.	.
10.833	290.9006	575.55	.	V	Q.	.	.	.	.
10.917	294.8883	579.01	.	V	Q.	.	.	.	.
11.000	298.9003	582.55	.	V	Q.	.	.	.	.
11.083	302.9370	586.12	.	V	Q.	.	.	.	.
11.167	306.9987	589.77	.	V	Q.	.	.	.	.
11.250	311.0860	593.46	.	V	Q.	.	.	.	.
11.333	315.1992	597.24	.	V	Q.	.	.	.	.
11.417	319.3380	600.96	.	V	Q.	.	.	.	.
11.500	323.5023	604.67	.	V	Q.	.	.	.	.
11.583	327.6927	608.43	.	V	Q.	.	.	.	.
11.667	331.9095	612.28	.	V	Q.	.	.	.	.
11.750	336.1532	616.18	.	V	Q.	.	.	.	.
11.833	340.4244	620.18	.	V	Q.	.	.	.	.
11.917	344.7235	624.23	.	V	Q.	.	.	.	.
12.000	349.0512	628.38	.	V	Q	.	.	.	.
12.083	353.4146	633.56	.	V	Q	.	.	.	.
12.167	357.8209	639.80	.	V	Q	.	.	.	.
12.250	362.2706	646.10	.	V	Q	.	.	.	.
12.333	366.7644	652.50	.	V	Q	.	.	.	.
12.417	371.3027	658.96	.	V	Q	.	.	.	.
12.500	375.8863	665.53	.	V	Q	.	.	.	.
12.583	380.5156	672.17	.	V	Q	.	.	.	.
12.667	385.1952	679.48	.	V	Q	.	.	.	.
12.750	389.9287	687.31	.	V	Q	.	.	.	.
12.833	394.7169	695.25	.	V	.Q	.	.	.	.
12.917	399.5605	703.27	.	V	.Q	.	.	.	.
13.000	404.4621	711.72	.	V	.Q	.	.	.	.
13.083	409.4351	722.08	.	V	.Q	.	.	.	.
13.167	414.4827	732.90	.	V	.Q	.	.	.	.
13.250	419.6112	744.66	.	V	.Q	.	.	.	.
13.333	424.8275	757.40	.	V	. Q	.	.	.	.
13.417	430.1399	771.37	.	V	. Q	.	.	.	.
13.500	435.5537	786.08	.	V	Q	.	.	.	.
13.583	441.0665	800.45	.	V	Q	.	.	.	.

13.667	446.6790	814.93	.	V	Q	.	.	.	.
13.750	452.3953	830.02	.	V	Q	.	.	.	.
13.833	458.2393	848.55	.	V	Q	.	.	.	.
13.917	464.1935	864.54	.	V	Q	.	.	.	.
14.000	470.2543	880.03	.	V	Q	.	.	.	.
14.083	476.4319	896.99	.	V	Q	.	.	.	.
14.167	482.7471	916.96	.	V	Q	.	.	.	.
14.250	489.2117	938.66	.	V	Q	.	.	.	.
14.333	495.8113	958.25	.	V	Q	.	.	.	.
14.417	502.5395	976.93	.	V	Q	.	.	.	.
14.500	509.4006	996.24	.	V	Q	.	.	.	.
14.583	516.4127	1018.15	.	V	Q	.	.	.	.
14.667	523.5743	1039.86	.	V	Q	.	.	.	.
14.750	530.9119	1065.42	.	.V	Q	.	.	.	.
14.833	538.4120	1089.02	.	.V	Q	.	.	.	.
14.917	546.0493	1108.92	.	.V	Q	.	.	.	.
15.000	553.8651	1134.85	.	.V	Q	.	.	.	.
15.083	561.8763	1163.23	.	.V	Q	.	.	.	.
15.167	570.0850	1191.90	.	.V	Q.	.	.	.	.
15.250	578.4967	1221.38	.	. V	Q.	.	.	.	.
15.333	587.1382	1254.74	.	. V	Q	.	.	.	.
15.417	595.9787	1283.64	.	. V	Q	.	.	.	.
15.500	604.9988	1309.71	.	. V	Q	.	.	.	.
15.583	614.1907	1334.67	.	. V	.Q	.	.	.	.
15.667	623.5594	1360.34	.	. V	.Q	.	.	.	.
15.750	633.1188	1388.01	.	. V	. Q	.	.	.	.
15.833	642.9120	1421.98	.	. V	. Q	.	.	.	.
15.917	652.9097	1451.65	.	. V	. Q	.	.	.	.
16.000	663.0909	1478.31	.	. V	. Q	.	.	.	.
16.083	673.6491	1533.06	.	. V	. Q	.	.	.	.
16.167	684.5969	1589.62	.	. V	. Q	.	.	.	.
16.250	695.7322	1616.85	.	. V	. Q	.	.	.	.
16.333	707.0193	1638.88	.	. V	. Q	.	.	.	.
16.417	718.4412	1658.47	.	. V	. Q	.	.	.	.
16.500	730.0089	1679.62	.	. V	. Q	.	.	.	.
16.583	741.7283	1701.66	.	. V	. Q	.	.	.	.
16.667	753.6937	1737.37	.	. V	. Q	.	.	.	.
16.750	765.8882	1770.65	.	. V	. Q	.	.	.	.
16.833	778.1986	1787.46	.	. V	. Q	.	.	.	.
16.917	790.6121	1802.44	.	. V	. Q	.	.	.	.
17.000	803.2501	1835.04	.	. V	. Q.	.	.	.	.
17.083	816.4216	1912.50	.	. V	. Q	.	.	.	.
17.167	829.7602	1936.76	.	. V	. Q	.	.	.	.
17.250	843.4115	1982.17	.	. V	. .Q	.	.	.	.
17.333	857.4005	2031.20	.	. V	. . Q	.	.	.	.
17.417	871.7515	2083.78	.	. V	. . Q	.	.	.	.
17.500	886.2947	2111.67	.	. V	. . Q	.	.	.	.
17.583	900.8060	2107.03	.	. V	. . Q	.	.	.	.
17.667	915.4159	2121.36	.	. V	. . Q	.	.	.	.
17.750	930.2795	2158.19	.	. V.	. . Q	.	.	.	.
17.833	945.9501	2275.37	.	. V.	. . Q	.	.	.	.
17.917	961.1279	2203.82	.	. V.	. . Q	.	.	.	.
18.000	976.2471	2195.30	.	. V	. . Q	.	.	.	.
18.083	991.4597	2208.88	.	. V	. . Q	.	.	.	.
18.167	1007.1274	2274.94	.	. V	. . Q	.	.	.	.
18.250	1023.1913	2332.48	.	. .V	. . Q	.	.	.	.
18.333	1038.7532	2259.58	.	. .V	. . Q	.	.	.	.
18.417	1054.0864	2226.39	.	. .V	. . Q	.	.	.	.

18.500	1069.5254	2241.74	. . . V . Q .
18.583	1085.5095	2320.90	. . . V . Q .
18.667	1101.2303	2282.66	. . . V . Q .
18.750	1117.5637	2371.60	. . . V . Q .
18.833	1133.3878	2297.66	. . . V . Q .
18.917	1148.4714	2190.15	. . . V . Q .
19.000	1164.7158	2358.68	. . . V . Q .
19.083	1181.0018	2364.74	. . . V . Q .
19.167	1197.1912	2350.69	. . . V . Q .
19.250	1213.2491	2331.62	. . . V . Q .
19.333	1229.8292	2407.42	. . . V . Q .
19.417	1245.4437	2267.23	. . . V . Q .
19.500	1260.5177	2188.74	. . . V . Q .
19.583	1275.3665	2156.03	. . . V . Q .
19.667	1290.3330	2173.14	. . . V . Q .
19.750	1305.6255	2220.46	. . . V . Q .
19.833	1321.3495	2283.12	. . . V . Q .
19.917	1336.5289	2204.06	. . . V . Q .
20.000	1350.9430	2092.92	. . . V . Q .
20.083	1365.0396	2046.81	. . . V . Q .
20.167	1379.2877	2068.83	. . . V . Q .
20.250	1393.1602	2014.28	. . . V . Q .
20.333	1406.5662	1946.56	. . . V.Q .
20.417	1419.9641	1945.38	. . . V.Q .
20.500	1433.1036	1907.87	. . . VQ .
20.583	1445.6505	1821.80	. . . Q. .
20.667	1457.8452	1770.67	. . . Q V .
20.750	1469.8567	1744.07	. . . Q V .
20.833	1481.6919	1718.47	. . . Q V .
20.917	1493.4215	1703.13	. . . Q V .
21.000	1504.8713	1662.52	. . . Q .V .
21.083	1516.0175	1618.42	. . . Q .V .
21.167	1526.8625	1574.71	. . . Q .V .
21.250	1537.4349	1535.10	. . . Q .V .
21.333	1547.6566	1484.19	. . Q . V .
21.417	1557.5374	1434.68	. . Q . V .
21.500	1567.2029	1403.43	. . Q . V .
21.583	1576.5070	1350.94	. . .Q . V .
21.667	1585.5970	1319.89	. . .Q . V .
21.750	1594.4984	1292.48	. . Q . V .
21.833	1603.1494	1256.13	. . Q . V .
21.917	1611.5582	1220.95	. . Q. . V .
22.000	1619.7845	1194.47	. . Q. . V .
22.083	1627.8330	1168.64	. . Q . . V .
22.167	1635.6515	1135.24	. . Q . . V .
22.250	1643.2786	1107.46	. . Q . . V .
22.333	1650.7476	1084.50	. . Q . . V .
22.417	1658.0566	1061.28	. . Q . . V .
22.500	1665.0789	1019.62	. . Q . . V .
22.583	1671.8778	987.20	. . Q . . V .
22.667	1678.5571	969.83	. . Q . . V .
22.750	1685.1210	953.07	. . Q . . V .
22.833	1691.5643	935.58	. . Q . . V .
22.917	1697.8784	916.81	. . Q . . V .
23.000	1704.0044	889.49	. . Q . . V .
23.083	1709.9008	856.16	. Q . . V .
23.167	1715.6854	839.93	. Q . . V .
23.250	1721.3719	825.68	. Q . . V .

23.333	1726.9629	811.81	. . Q . . V .
23.417	1732.4568	797.71	. . Q . . V .
23.500	1737.8596	784.49	. . Q . . V .
23.583	1743.1812	772.68	. . Q . . V .
23.667	1748.4222	761.01	. . Q . . V .
23.750	1753.5786	748.70	. .Q . . V .
23.833	1758.5942	728.27	. .Q . . V .
23.917	1763.3815	695.10	. .Q . . V .
24.000	1768.0863	683.15	. Q . . V .
24.083	1772.7206	672.90	. Q . . V .
24.167	1777.2823	662.37	. Q . . V .
24.250	1781.7644	650.80	. Q . . V .
24.333	1786.1707	639.79	. Q . . V .
24.417	1790.4973	628.23	. Q . . V .
24.500	1794.7520	617.77	. Q. . V .
24.583	1798.9380	607.82	. Q. . V .
24.667	1803.0529	597.47	. Q. . V .
24.750	1807.0972	587.23	. Q. . V .
24.833	1811.0696	576.80	. Q. . V .
24.917	1814.9800	567.79	. Q. . V .
25.000	1818.8292	558.91	. Q . . V .
25.083	1822.6143	549.59	. Q . . V .
25.167	1826.3347	540.21	. Q . . V .
25.250	1829.9880	530.46	. Q . . V .
25.333	1833.5715	520.32	. Q . . V .
25.417	1837.0791	509.29	. Q . . V .
25.500	1840.5110	498.31	. Q . . V .
25.583	1843.8655	487.07	. Q . . V .
25.667	1847.1459	476.32	. Q . . V .
25.750	1850.3508	465.35	. Q . . V .
25.833	1853.4692	452.80	. Q . . V .
25.917	1856.5178	442.65	. Q . . V .
26.000	1859.5004	433.06	. Q . . V .
26.083	1862.4165	423.43	. Q . . V .
26.167	1865.2596	412.83	. Q . . V .
26.250	1868.0236	401.32	. Q . . V .
26.333	1870.7180	391.24	. Q . . V .
26.417	1873.3479	381.86	. Q . . V .
26.500	1875.9115	372.24	. Q . . V .
26.583	1878.3990	361.18	. Q . . V .
26.667	1880.8151	350.80	. Q . . V.
26.750	1883.1481	338.74	. Q . . V.
26.833	1885.4086	328.23	. Q . . V.
26.917	1887.6123	319.97	. Q . . V.
27.000	1889.7361	308.37	. Q . . V.
27.083	1891.7793	296.67	. Q . . V.
27.167	1893.7429	285.12	. Q . . V.
27.250	1895.6265	273.50	. Q . . V.
27.333	1897.4163	259.88	. Q . . V.
27.417	1899.0953	243.80	. Q . . V.
27.500	1900.6780	229.79	. Q . . V.
27.583	1902.1989	220.83	. Q . . V.
27.667	1903.6564	211.64	. Q . . V.
27.750	1905.0419	201.17	. Q . . V.
27.833	1906.3424	188.84	. Q . . V.
27.917	1907.5664	177.73	. Q . . V.
28.000	1908.7267	168.46	. Q . . V.
28.083	1909.8271	159.79	. Q . . V.

28.167	1910.8627	150.36	. Q	.	.	.	V.
28.250	1911.8378	141.59	. Q	.	.	.	V.
28.333	1912.7585	133.70	. Q	.	.	.	V.
28.417	1913.6235	125.60	. Q	.	.	.	V.
28.500	1914.4363	118.01	.Q	.	.	.	V.
28.583	1915.2054	111.69	.Q	.	.	.	V.
28.667	1915.9352	105.96	.Q	.	.	.	V.
28.750	1916.6259	100.28	.Q	.	.	.	V.
28.833	1917.2773	94.59	.Q	.	.	.	V.
28.917	1917.8885	88.76	.Q	.	.	.	V.
29.000	1918.4614	83.18	.Q	.	.	.	V.
29.083	1918.9980	77.91	.Q	.	.	.	V.
29.167	1919.5002	72.92	.Q	.	.	.	V.
29.250	1919.9696	68.14	.Q	.	.	.	V.
29.333	1920.4087	63.76	.Q	.	.	.	V.
29.417	1920.8217	59.96	Q	.	.	.	V.
29.500	1921.2101	56.40	Q	.	.	.	V.
29.583	1921.5780	53.42	Q	.	.	.	V.
29.667	1921.9264	50.59	Q	.	.	.	V.
29.750	1922.2555	47.79	Q	.	.	.	V.
29.833	1922.5664	45.15	Q	.	.	.	V.
29.917	1922.8601	42.64	Q	.	.	.	V.
30.000	1923.1367	40.16	Q	.	.	.	V.
30.083	1923.3964	37.71	Q	.	.	.	V.
30.167	1923.6403	35.41	Q	.	.	.	V.
30.250	1923.8689	33.20	Q	.	.	.	V.
30.333	1924.0824	31.00	Q	.	.	.	V.
30.417	1924.2809	28.82	Q	.	.	.	V.
30.500	1924.4670	27.03	Q	.	.	.	V.
30.583	1924.6428	25.52	Q	.	.	.	V.
30.667	1924.8083	24.03	Q	.	.	.	V.
30.750	1924.9636	22.55	Q	.	.	.	V.
30.833	1925.1088	21.08	Q	.	.	.	V.
30.917	1925.2439	19.63	Q	.	.	.	V.
31.000	1925.3702	18.35	Q	.	.	.	V.
31.083	1925.4901	17.40	Q	.	.	.	V.
31.167	1925.6035	16.47	Q	.	.	.	V.
31.250	1925.7106	15.54	Q	.	.	.	V.
31.333	1925.8113	14.63	Q	.	.	.	V.
31.417	1925.9058	13.72	Q	.	.	.	V.
31.500	1925.9940	12.81	Q	.	.	.	V.
31.583	1926.0760	11.91	Q	.	.	.	V.
31.667	1926.1520	11.02	Q	.	.	.	V.
31.750	1926.2218	10.14	Q	.	.	.	V.
31.833	1926.2866	9.42	Q	.	.	.	V.
31.917	1926.3495	9.13	Q	.	.	.	V.
32.000	1926.4105	8.87	Q	.	.	.	V.
32.083	1926.4698	8.61	Q	.	.	.	V.
32.167	1926.5273	8.35	Q	.	.	.	V.
32.250	1926.5831	8.10	Q	.	.	.	V.
32.333	1926.6372	7.85	Q	.	.	.	V.
32.417	1926.6896	7.60	Q	.	.	.	V.
32.500	1926.7402	7.36	Q	.	.	.	V.
32.583	1926.7892	7.11	Q	.	.	.	V.
32.667	1926.8365	6.87	Q	.	.	.	V.
32.750	1926.8822	6.63	Q	.	.	.	V.
32.833	1926.9263	6.39	Q	.	.	.	V.
32.917	1926.9686	6.16	Q	.	.	.	V.

33.000	1927.0094	5.92	Q	.	.	.	V.
33.083	1927.0486	5.69	Q	.	.	.	V.
33.167	1927.0862	5.46	Q	.	.	.	V.
33.250	1927.1222	5.23	Q	.	.	.	V.
33.333	1927.1566	5.00	Q	.	.	.	V.
33.417	1927.1896	4.78	Q	.	.	.	V.
33.500	1927.2209	4.56	Q	.	.	.	V.
33.583	1927.2509	4.34	Q	.	.	.	V.
33.667	1927.2793	4.12	Q	.	.	.	V.
33.750	1927.3062	3.91	Q	.	.	.	V.
33.833	1927.3315	3.69	Q	.	.	.	V.
33.917	1927.3555	3.48	Q	.	.	.	V.
34.000	1927.3781	3.27	Q	.	.	.	V.
34.083	1927.3992	3.06	Q	.	.	.	V.
34.167	1927.4188	2.86	Q	.	.	.	V.
34.250	1927.4370	2.65	Q	.	.	.	V.
34.333	1927.4539	2.44	Q	.	.	.	V.
34.417	1927.4692	2.24	Q	.	.	.	V.
34.500	1927.4833	2.04	Q	.	.	.	V.
34.583	1927.4960	1.84	Q	.	.	.	V.
34.667	1927.5072	1.64	Q	.	.	.	V.
34.750	1927.5171	1.44	Q	.	.	.	V.
34.833	1927.5256	1.24	Q	.	.	.	V.
34.917	1927.5328	1.05	Q	.	.	.	V.
35.000	1927.5387	0.85	Q	.	.	.	V.
35.083	1927.5432	0.66	Q	.	.	.	V.
35.167	1927.5465	0.47	Q	.	.	.	V.
35.250	1927.5485	0.28	Q	.	.	.	V
35.333	1927.5491	0.09	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%	2120.0
10%	1430.0
20%	1060.0
30%	645.0
40%	500.0
50%	405.0
60%	330.0
70%	265.0
80%	200.0
90%	125.0

END OF FLOODSCx ROUTING ANALYSIS

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

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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 5-YR EV DEC 2022 ROKAMOTO                                              *
 **************************************************************************

  FILE NAME: EV05126S.DAT
  TIME/DATE OF STUDY: 16:26 12/12/2022


                         ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   50438.699 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.426 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.496; LOW LOSS FRACTION = 0.848
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.62
    3-HOUR =  1.15;    6-HOUR =  1.71; 24-HOUR =  3.01
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.341; 30-MINUTE = 0.392;  1-HOUR = 0.432
    3-HOUR = 0.782;    6-HOUR = 0.902; 24-HOUR = 0.943
==========================================================================
```



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 +-------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV05126S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 | 10100.00     126.00| Subarea (UH) Added to Stream #1|       0.0      2344.1|
19.167 |             |           |
 +-------------------+--------------------------------+---------------------+-
----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
```

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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 5-YR EV DEC 2022 ROKAMOTO                                              *
 **************************************************************************

  FILE NAME: EV05127S.DAT
  TIME/DATE OF STUDY: 16:26 12/12/2022


                         ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    127.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   53506.199 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.580 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.479; LOW LOSS FRACTION = 0.843
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.23; 30-MINUTE =  0.44;  1-HOUR =  0.61
    3-HOUR =  1.13;    6-HOUR =  1.68; 24-HOUR =  2.95
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.331; 30-MINUTE = 0.383;  1-HOUR = 0.424
    3-HOUR = 0.773;    6-HOUR = 0.898; 24-HOUR = 0.941
==========================================================================
```



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 +-------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV05127S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     127.00| Subarea (UH) Added to Stream #1|       0.0      2441.1|
19.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 5-YR EV DEC 2022 ROKAMOTO                                              *
 ************************************************************************

  FILE NAME: EV05137S.DAT
  TIME/DATE OF STUDY: 16:29 12/12/2022


                        ** INPUT SUMMARY **


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    137.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==============================================================================
  WATERSHED AREA =   67798.297 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.951 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.474; LOW LOSS FRACTION = 0.829
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.22; 30-MINUTE =  0.44;  1-HOUR =  0.60
    3-HOUR =  1.09;    6-HOUR =  1.59; 24-HOUR =  2.78
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933
==============================================================================
```



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 +-------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV05137S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     137.00| Subarea (UH) Added to Stream #1|       0.0      2838.1|
19.583 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
```

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                         Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138                                    *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                 *
* 5-YR EV DEC 2022 ROKAMOTO                                                  *
 **************************************************************************

  FILE NAME: EV05138S.DAT
  TIME/DATE OF STUDY: 16:29 12/12/2022


                         ** INPUT SUMMARY **


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    138.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==============================================================================
  WATERSHED AREA =   69102.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    4.081 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.474; LOW LOSS FRACTION = 0.828
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.22; 30-MINUTE =  0.44;  1-HOUR =  0.60
    3-HOUR =  1.09;    6-HOUR =  1.59; 24-HOUR =  2.77
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932
==============================================================================
```



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 +--------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV05138S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     138.00| Subarea (UH) Added to Stream #1|       0.0      2836.0|
19.750 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                            |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                    |
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------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 5-YR EV DEC 2022 ROKAMOTO                                              *
 **************************************************************************

  FILE NAME: EV05139S.DAT
  TIME/DATE OF STUDY: 16:30 12/12/2022


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    139.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   69529.797 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    4.144 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.473; LOW LOSS FRACTION = 0.827
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.22; 30-MINUTE =  0.44;  1-HOUR =  0.60
    3-HOUR =  1.09;    6-HOUR =  1.59; 24-HOUR =  2.76
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932
==========================================================================
```



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 +-------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV05139S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     139.00| Subarea (UH) Added to Stream #1|       0.0      2856.4|
19.417 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```

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

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

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                      5 Hutton Centre Drive Suite 500
                           Santa Ana, CA 92707


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJJO - SINGLE AREA UH                                 *
* PHASE CONDITION NO PA4&5 - REGIONAL NODE 119                           *
* 10-YR EV JANUARY 2019 ROKAMOTO                                         *
 ************************************************************************

  FILE NAME: EV10119S.DAT
  TIME/DATE OF STUDY: 14:38 01/02/2019


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    119.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   49511.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.320 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.298
         LOW LOSS FRACTION = 0.746
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.33
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.63
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  0.88
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  1.65
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  2.45
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  4.32

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.345
          30-MINUTE FACTOR = 0.395
           1-HOUR FACTOR = 0.435
           3-HOUR FACTOR = 0.785
           6-HOUR FACTOR = 0.904
          24-HOUR FACTOR = 0.944

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.592
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.205	1229.030
2	0.616	2458.061
3	1.026	2458.061
4	1.437	2458.058
5	1.849	2468.566
6	2.392	3252.936
7	3.017	3740.529
8	3.642	3740.519
9	4.492	5088.808
10	5.646	6911.804
11	7.038	8336.653
12	8.701	9957.372
13	10.573	11207.585
14	12.371	10765.631
15	14.356	11887.693
16	16.755	14365.111
17	18.676	11501.519
18	20.748	12408.988
19	23.329	15456.046
20	25.596	13572.103
21	27.693	12556.111
22	30.286	15524.766
23	33.073	16687.938
24	35.987	17448.078
25	38.316	13945.771
26	41.687	20188.930
27	44.925	19386.545
28	48.531	21593.037
29	51.724	19119.570
30	54.294	15384.871
31	56.855	15340.307
32	60.009	18885.350
33	63.439	20534.457
34	66.036	15551.319
35	68.534	14960.768
36	71.029	14937.195
37	73.253	13314.927
38	75.483	13354.854
39	77.240	10520.556
40	78.836	9558.871
41	80.461	9726.986
42	82.118	9921.462
43	83.640	9117.294
44	85.047	8424.595
45	86.331	7685.526
46	87.441	6647.687
47	88.418	5847.585
48	89.263	5061.280

49	90.090	4954.655
50	90.853	4565.568
51	91.609	4528.107
52	92.330	4318.923
53	93.015	4097.540
54	93.698	4094.251
55	94.255	3334.031
56	94.711	2731.693
57	95.167	2730.049
58	95.624	2731.693
59	96.040	2494.002
60	96.331	1741.914
61	96.613	1686.545
62	96.894	1686.545
63	97.176	1686.545
64	97.458	1686.545
65	97.740	1688.190
66	97.986	1476.538
67	98.072	514.442
68	98.140	403.706
69	98.207	405.350
70	98.274	402.107
71	98.342	403.751
72	98.409	402.107
73	98.476	403.706
74	98.544	403.751
75	98.611	403.706
76	98.679	403.751
77	98.746	400.462
78	98.813	403.751
79	98.881	406.949
80	98.948	400.508
81	99.015	403.706
82	99.082	400.508
83	99.149	400.508
84	99.216	400.508
85	99.283	400.508
86	99.350	400.508
87	99.417	400.508
88	99.483	400.508
89	99.550	400.508
90	99.617	400.508
91	99.684	400.508
92	99.751	400.508
93	99.818	400.508
94	99.885	400.508
95	99.952	400.508
96	100.000	289.497

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 11933.5947
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 4873.6636

==========

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.	1800.0	3600.0	5400.0	7200.0
0.083	0.0134	1.95	Q	.	.	.	.
0.167	0.0536	5.84	Q	.	.	.	.
0.250	0.1207	9.75	Q	.	.	.	.
0.333	0.2148	13.66	Q	.	.	.	.
0.417	0.3361	17.61	Q	.	.	.	.
0.500	0.4932	22.81	Q	.	.	.	.
0.583	0.6915	28.79	Q	.	.	.	.
0.667	0.9312	34.80	Q	.	.	.	.
0.750	1.2270	42.95	Q	.	.	.	.
0.833	1.5991	54.02	Q	.	.	.	.
0.917	2.0630	67.37	Q	.	.	.	.
1.000	2.6369	83.33	Q	.	.	.	.
1.083	3.3346	101.31	Q	.	.	.	.
1.167	4.1517	118.64	Q	.	.	.	.
1.250	5.1008	137.81	Q	.	.	.	.
1.333	6.2093	160.95	Q	.	.	.	.
1.417	7.4464	179.63	Q	.	.	.	.
1.500	8.8225	199.81	VQ	.	.	.	.
1.583	10.3711	224.86	VQ	.	.	.	.
1.667	12.0723	247.01	VQ	.	.	.	.
1.750	13.9155	267.63	VQ	.	.	.	.
1.833	15.9334	293.01	VQ	.	.	.	.
1.917	18.1393	320.30	VQ	.	.	.	.
2.000	20.5421	348.89	VQ	.	.	.	.
2.083	23.1042	372.01	V Q	.	.	.	.
2.167	25.8942	405.10	V Q	.	.	.	.
2.250	28.9039	437.01	V Q	.	.	.	.
2.333	32.1582	472.53	V Q	.	.	.	.
2.417	35.6308	504.22	V Q	.	.	.	.
2.500	39.2819	530.13	V Q	.	.	.	.
2.583	43.1113	556.03	V Q	.	.	.	.
2.667	47.1585	587.66	V Q	.	.	.	.
2.750	51.4420	621.96	V Q	.	.	.	.
2.833	55.9083	648.52	V Q	.	.	.	.
2.917	60.5516	674.21	V Q	.	.	.	.
3.000	65.3724	699.97	V Q	.	.	.	.
3.083	70.3533	723.23	V Q	.	.	.	.
3.167	75.4955	746.66	V Q	.	.	.	.
3.250	80.7687	765.66	V Q	.	.	.	.
3.333	86.1628	783.23	V Q	.	.	.	.
3.417	91.6802	801.12	V Q	.	.	.	.
3.500	97.3234	819.40	V Q	.	.	.	.
3.583	103.0841	836.45	V Q	.	.	.	.
3.667	108.9553	852.50	V Q	.	.	.	.
3.750	114.9293	867.42	V Q	.	.	.	.
3.833	120.9953	880.79	V Q	.	.	.	.
3.917	127.1449	892.91	.V Q	.	.	.	.

4.000	133.3699	903.88	.V	Q	.	.	.	.
4.083	139.6695	914.70	.V	Q	.	.	.	.
4.167	146.0399	924.98	.V	Q	.	.	.	.
4.250	152.4808	935.23	.V	Q	.	.	.	.
4.333	158.9906	945.22	.V	Q	.	.	.	.
4.417	165.5669	954.88	.V	Q	.	.	.	.
4.500	172.2103	964.62	.V	Q	.	.	.	.
4.583	178.9126	973.17	.V	Q	.	.	.	.
4.667	185.6678	980.85	.V	Q	.	.	.	.
4.750	192.4760	988.54	.V	Q	.	.	.	.
4.833	199.3376	996.31	.V	Q	.	.	.	.
4.917	206.2503	1003.72	.V	Q	.	.	.	.
5.000	213.2063	1010.02	.V	Q	.	.	.	.
5.083	220.2052	1016.24	.V	Q	.	.	.	.
5.167	227.2474	1022.53	.V	Q	.	.	.	.
5.250	234.3331	1028.84	.V	Q	.	.	.	.
5.333	241.4627	1035.22	.V	Q	.	.	.	.
5.417	248.6364	1041.62	. V	Q	.	.	.	.
5.500	255.8524	1047.76	. V	Q	.	.	.	.
5.583	263.1003	1052.40	. V	Q	.	.	.	.
5.667	270.3795	1056.93	. V	Q	.	.	.	.
5.750	277.6899	1061.48	. V	Q	.	.	.	.
5.833	285.0321	1066.09	. V	Q	.	.	.	.
5.917	292.4062	1070.72	. V	Q	.	.	.	.
6.000	299.8128	1075.43	. V	Q	.	.	.	.
6.083	307.2518	1080.14	. V	Q	.	.	.	.
6.167	314.7239	1084.94	. V	Q	.	.	.	.
6.250	322.2291	1089.75	. V	Q	.	.	.	.
6.333	329.7680	1094.65	. V	Q	.	.	.	.
6.417	337.3406	1099.55	. V	Q	.	.	.	.
6.500	344.9477	1104.54	. V	Q	.	.	.	.
6.583	352.5892	1109.55	. V	Q	.	.	.	.
6.667	360.2658	1114.64	. V	Q	.	.	.	.
6.750	367.9775	1119.75	. V	Q	.	.	.	.
6.833	375.7251	1124.94	. V	Q	.	.	.	.
6.917	383.5085	1130.15	. V	Q	.	.	.	.
7.000	391.3284	1135.45	. V	Q	.	.	.	.
7.083	399.1850	1140.77	. V	Q	.	.	.	.
7.167	407.0789	1146.19	. V	Q	.	.	.	.
7.250	415.0102	1151.63	. V	Q	.	.	.	.
7.333	422.9796	1157.16	. V	Q	.	.	.	.
7.417	430.9873	1162.71	. V	Q	.	.	.	.
7.500	439.0340	1168.37	. V	Q	.	.	.	.
7.583	447.1197	1174.05	. V	Q	.	.	.	.
7.667	455.2453	1179.84	. V	Q	.	.	.	.
7.750	463.4109	1185.64	. V	Q	.	.	.	.
7.833	471.6173	1191.56	. V	Q	.	.	.	.
7.917	479.8646	1197.50	. V	Q	.	.	.	.
8.000	488.1523	1203.39	. V	Q	.	.	.	.
8.083	496.4776	1208.83	. V	Q	.	.	.	.
8.167	504.8412	1214.40	. V	Q	.	.	.	.
8.250	513.2433	1219.99	. V	Q	.	.	.	.
8.333	521.6848	1225.70	. V	Q	.	.	.	.
8.417	530.1658	1231.44	. V	Q	.	.	.	.
8.500	538.6871	1237.31	. V	Q	.	.	.	.
8.583	547.2491	1243.20	. V	Q	.	.	.	.
8.667	555.8526	1249.23	. V	Q	.	.	.	.
8.750	564.4978	1255.28	. V	Q	.	.	.	.

8.833	573.1857	1261.48	.	V	Q	.	.	.	.
8.917	581.9164	1267.70	.	V	Q	.	.	.	.
9.000	590.6910	1274.07	.	V	Q	.	.	.	.
9.083	599.5096	1280.47	.	V	Q	.	.	.	.
9.167	608.3735	1287.03	.	V	Q	.	.	.	.
9.250	617.2827	1293.62	.	V	Q	.	.	.	.
9.333	626.2384	1300.37	.	V	Q	.	.	.	.
9.417	635.2408	1307.15	.	V	Q	.	.	.	.
9.500	644.2911	1314.10	.	V	Q	.	.	.	.
9.583	653.3896	1321.10	.	V	Q	.	.	.	.
9.667	662.5374	1328.26	.	V	Q	.	.	.	.
9.750	671.7348	1335.47	.	V	Q	.	.	.	.
9.833	680.9832	1342.86	.	V	Q	.	.	.	.
9.917	690.2827	1350.29	.	V	Q	.	.	.	.
10.000	699.6348	1357.92	.	V	Q	.	.	.	.
10.083	709.0397	1365.59	.	V	Q	.	.	.	.
10.167	718.4988	1373.47	.	V	Q	.	.	.	.
10.250	728.0126	1381.40	.	V	Q	.	.	.	.
10.333	737.5824	1389.54	.	V	Q	.	.	.	.
10.417	747.2087	1397.73	.	V	Q	.	.	.	.
10.500	756.8929	1406.15	.	V	Q	.	.	.	.
10.583	766.6355	1414.63	.	V	Q	.	.	.	.
10.667	776.4381	1423.34	.	V	Q	.	.	.	.
10.750	786.3012	1432.12	.	V	Q	.	.	.	.
10.833	796.2264	1441.14	.	V	Q	.	.	.	.
10.917	806.2143	1450.24	.	V	Q	.	.	.	.
11.000	816.2666	1459.59	.	V	Q	.	.	.	.
11.083	826.3839	1469.03	.	V	Q	.	.	.	.
11.167	836.5680	1478.73	.	V	Q	.	.	.	.
11.250	846.8196	1488.53	.	V	Q	.	.	.	.
11.333	857.1406	1498.61	.	V	Q	.	.	.	.
11.417	867.5317	1508.79	.	V	Q	.	.	.	.
11.500	877.9949	1519.27	.	V	Q	.	.	.	.
11.583	888.5311	1529.86	.	V	Q	.	.	.	.
11.667	899.1425	1540.76	.	V	Q	.	.	.	.
11.750	909.8297	1551.79	.	V	Q	.	.	.	.
11.833	920.5952	1563.15	.	V	Q	.	.	.	.
11.917	931.4399	1574.65	.	V	Q	.	.	.	.
12.000	942.3663	1586.51	.	V	Q	.	.	.	.
12.083	953.3975	1601.73	.	V	Q	.	.	.	.
12.167	964.5582	1620.53	.	V	Q.	.	.	.	.
12.250	975.8493	1639.47	.	V	Q.	.	.	.	.
12.333	987.2734	1658.79	.	V	Q.	.	.	.	.
12.417	998.8318	1678.27	.	V	Q.	.	.	.	.
12.500	1010.5413	1700.21	.	V	Q.	.	.	.	.
12.583	1022.4117	1723.58	.	V	Q.	.	.	.	.
12.667	1034.4459	1747.36	.	V	Q.	.	.	.	.
12.750	1046.6693	1774.84	.	V	Q.	.	.	.	.
12.833	1059.1178	1807.51	.	V	Q	.	.	.	.
12.917	1071.8180	1844.06	.	V	Q	.	.	.	.
13.000	1084.8020	1885.28	.	V	Q	.	.	.	.
13.083	1098.0933	1929.88	.	V	Q	.	.	.	.
13.167	1111.6865	1973.75	.	V	Q	.	.	.	.
13.250	1125.6029	2020.66	.	V	.Q	.	.	.	.
13.333	1139.8901	2074.51	.	V	.Q	.	.	.	.
13.417	1154.4972	2120.95	.	V	.Q	.	.	.	.
13.500	1169.4436	2170.22	.	V	. Q	.	.	.	.
13.583	1184.7854	2227.63	.	V	. Q	.	.	.	.

13.667	1200.4917	2280.55	. V. Q . . .
13.750	1216.5450	2330.94	. V. Q . . .
13.833	1233.0027	2389.64	. V Q . . .
13.917	1249.8866	2451.54	. V Q . . .
14.000	1267.2140	2515.94	. V Q . . .
14.083	1284.9882	2580.81	. V Q . . .
14.167	1303.3896	2671.90	. V Q . . .
14.250	1322.4010	2760.44	. V Q . . .
14.333	1342.0612	2854.65	. .V Q . . .
14.417	1362.3229	2942.00	. .V Q . . .
14.500	1383.1595	3025.49	. .V Q . . .
14.583	1404.5925	3112.07	. .V Q . . .
14.667	1426.6827	3207.51	. .V Q . . .
14.750	1449.5262	3316.87	. .V Q . . .
14.833	1473.1248	3426.50	. . V Q. . . .
14.917	1497.5322	3543.97	. . V Q. . . .
15.000	1522.8234	3672.27	. . V Q . . .
15.083	1549.0178	3803.44	. . V .Q . . .
15.167	1576.0754	3928.77	. . V .Q . . .
15.250	1603.9832	4052.20	. . V . Q . . .
15.333	1632.8357	4189.39	. . V . Q . . .
15.417	1662.4099	4294.17	. . V . Q . . .
15.500	1692.6924	4397.01	. . V . Q . . .
15.583	1723.8174	4519.36	. . V . Q . . .
15.667	1755.6539	4622.67	. . V . Q . . .
15.750	1788.1023	4711.50	. . V . Q . . .
15.833	1821.2473	4812.65	. . V . Q . . .
15.917	1855.1149	4917.57	. . V . Q . . .
16.000	1889.7937	5035.36	. . V . Q . . .
16.083	1925.6948	5212.83	. . V . Q . . .
16.167	1962.9656	5411.71	. . V . Q . . .
16.250	2000.8004	5493.63	. . V . Q . . .
16.333	2039.2371	5581.00	. . V . .Q . . .
16.417	2078.1680	5652.78	. . V . .Q . . .
16.500	2117.8438	5760.94	. . V . . Q . . .
16.583	2158.0376	5836.16	. . V . . Q . . .
16.667	2198.6501	5896.94	. . V . . Q . . .
16.750	2240.6721	6101.58	. . V . . Q . . .
16.833	2284.0723	6301.72	. . V . . Q . . .
16.917	2328.5022	6451.24	. . V. . Q . . .
17.000	2374.0632	6615.45	. . V. . Q . . .
17.083	2420.4255	6731.82	. . V. . Q . . .
17.167	2466.6240	6708.03	. . V . Q . . .
17.250	2513.4094	6793.24	. . V . Q . . .
17.333	2561.2524	6946.79	. . .V . Q . . .
17.417	2607.6821	6741.61	. . .V . Q . . .
17.500	2654.6084	6813.71	. . .V . Q . . .
17.583	2702.9231	7015.31	. . . V . Q . . .
17.667	2750.0051	6836.30	. . . V . Q . . .
17.750	2796.5654	6760.55	. . . V . Q . . .
17.833	2844.6965	6988.62	. . . V . Q . . .
17.917	2893.3469	7064.03	. . . V . Q. . . .
18.000	2941.8123	7037.18	. . . V . Q. . . .
18.083	2988.1130	6722.87	. . . V . Q . . .
18.167	3037.6150	7187.70	. . . V . Q. . . .
18.250	3086.5288	7102.28	. . . V . Q. . . .
18.333	3136.0955	7197.07	. . . V . Q. . . .
18.417	3183.7024	6912.53	. . . V . Q . . .

18.500	3229.1511	6599.17	. . . V . Q . . .
18.583	3274.6182	6601.81	. . . V . Q . . .
18.667	3322.1187	6897.07	. . . V . Q . . .
18.750	3370.1870	6979.54	. . . V . Q . . .
18.833	3415.0693	6516.91	. . . V . Q . . .
18.917	3459.1633	6402.44	. . . V . Q . . .
19.000	3502.7200	6324.42	. . . V . Q . . .
19.083	3545.1936	6167.18	. . . V. Q . . .
19.167	3586.8989	6055.61	. . . V. Q . . .
19.250	3626.3687	5730.99	. . . V.Q . . .
19.333	3664.5784	5548.05	. . . Q . . .
19.417	3702.2524	5470.26	. . . Q . . .
19.500	3739.5203	5411.30	. . . Q . . .
19.583	3775.6147	5240.91	. . . QV . . .
19.667	3810.3723	5046.79	. . . Q .V . . .
19.750	3843.6484	4831.69	. . . Q .V . . .
19.833	3875.4817	4622.18	. . . Q .V . . .
19.917	3906.0095	4432.65	. . . Q . V . . .
20.000	3935.2505	4245.77	. . . Q . V . . .
20.083	3963.6733	4127.00	. . . Q . V . . .
20.167	3990.9722	3963.78	. . . Q . V . . .
20.250	4017.4678	3847.15	. . .Q . V . . .
20.333	4043.0642	3716.61	. . Q . V . . .
20.417	4067.7742	3587.90	. . Q. . V . . .
20.500	4091.6941	3473.19	. . Q. . V . . .
20.583	4114.4453	3303.49	. . Q . V . . .
20.667	4136.1162	3146.63	. . Q . V . . .
20.750	4157.0327	3037.08	. . Q . V . . .
20.833	4177.3232	2946.17	. . Q . V . . .
20.917	4196.8896	2841.03	. . Q . V . . .
21.000	4215.5073	2703.28	. . Q . V . . .
21.083	4233.5957	2626.47	. . Q . V . . .
21.167	4251.2031	2556.57	. . Q . V . . .
21.250	4268.3809	2494.20	. . Q . V . . .
21.333	4285.1216	2430.74	. . Q . V . . .
21.417	4301.3994	2363.55	. . Q . V . . .
21.500	4317.0439	2271.60	. . Q . V . . .
21.583	4331.7422	2134.21	. .Q . V . . .
21.667	4346.0229	2073.60	. .Q . V . . .
21.750	4359.9648	2024.39	. .Q . V . . .
21.833	4373.5830	1977.35	. Q . V . . .
21.917	4386.8726	1929.67	. Q . V . . .
22.000	4399.8730	1887.65	. Q . V . . .
22.083	4412.5732	1844.06	. Q . V . . .
22.167	4424.9785	1801.24	. Q . V . . .
22.250	4437.0894	1758.48	. Q. . V . . .
22.333	4448.9092	1716.24	. Q. . V . . .
22.417	4460.4409	1674.39	. Q. . V . . .
22.500	4471.6997	1634.77	. Q. . V . . .
22.583	4482.7520	1604.80	. Q . V . . .
22.667	4493.6143	1577.20	. Q . V . . .
22.750	4504.2959	1550.96	. Q . V . . .
22.833	4514.7979	1524.87	. Q . V . . .
22.917	4525.1304	1500.28	. Q . V . . .
23.000	4535.3110	1478.22	. Q . V . . .
23.083	4545.3447	1456.90	. Q . V . . .
23.167	4555.2354	1436.11	. Q . V . . .
23.250	4564.9868	1415.89	. Q . V . . .

23.333	4574.6064	1396.77	.	Q	.	.	V	.
23.417	4584.1084	1379.71	.	Q	.	.	V	.
23.500	4593.4985	1363.42	.	Q	.	.	V	.
23.583	4602.7944	1349.80	.	Q	.	.	V	.
23.667	4612.0015	1336.88	.	Q	.	.	V	.
23.750	4621.1230	1324.48	.	Q	.	.	V	.
23.833	4630.1587	1312.01	.	Q	.	.	V	.
23.917	4639.1001	1298.28	.	Q	.	.	V	.
24.000	4647.8774	1274.46	.	Q	.	.	V	.
24.083	4656.3979	1237.18	.	Q	.	.	V	.
24.167	4664.8125	1221.82	.	Q	.	.	V	.
24.250	4673.1240	1206.82	.	Q	.	.	V	.
24.333	4681.3315	1191.74	.	Q	.	.	V	.
24.417	4689.4258	1175.30	.	Q	.	.	V	.
24.500	4697.3979	1157.53	.	Q	.	.	V	.
24.583	4705.2417	1138.94	.	Q	.	.	V	.
24.667	4712.9575	1120.37	.	Q	.	.	V	.
24.750	4720.5308	1099.66	.	Q	.	.	V	.
24.833	4727.9419	1076.13	.	Q	.	.	V	.
24.917	4735.1763	1050.40	.	Q	.	.	V	.
25.000	4742.2222	1023.07	.	Q	.	.	V	.
25.083	4749.0830	996.20	.	Q	.	.	V	.
25.167	4755.7656	970.33	.	Q	.	.	V	.
25.250	4762.2598	942.96	.	Q	.	.	V	.
25.333	4768.5405	911.96	.	Q	.	.	V	.
25.417	4774.6411	885.78	.	Q	.	.	V	.
25.500	4780.5532	858.42	.	Q	.	.	V	.
25.583	4786.2456	826.51	.	Q	.	.	V	.
25.667	4791.7402	797.85	.	Q	.	.	V	.
25.750	4797.0503	771.05	.	Q	.	.	V	.
25.833	4802.1455	739.80	.	Q	.	.	V	.
25.917	4807.0146	706.98	.	Q	.	.	V	.
26.000	4811.6528	673.50	.	Q	.	.	V	.
26.083	4816.1060	646.58	.	Q	.	.	V	.
26.167	4820.3071	610.03	.	Q	.	.	V	.
26.250	4824.2676	575.03	.	Q	.	.	V	.
26.333	4827.9648	536.82	.	Q	.	.	V	.
26.417	4831.4277	502.80	.	Q	.	.	V	.
26.500	4834.6987	474.93	.	Q	.	.	V	.
26.583	4837.7798	447.35	.	Q	.	.	V	.
26.667	4840.6338	414.37	.	Q	.	.	V	.
26.750	4843.2441	379.03	.	Q	.	.	V	.
26.833	4845.6670	351.80	.	Q	.	.	V	.
26.917	4847.9102	325.71	.	Q	.	.	V	.
27.000	4849.9751	299.84	.	Q	.	.	V	.
27.083	4851.8809	276.71	.	Q	.	.	V	.
27.167	4853.6279	253.68	.	Q	.	.	V	.
27.250	4855.2485	235.30	.	Q	.	.	V	.
27.333	4856.7539	218.56	.	Q	.	.	V	.
27.417	4858.1431	201.68	.	Q	.	.	V	.
27.500	4859.4146	184.61	.	Q	.	.	V	.
27.583	4860.5781	168.93	.	Q	.	.	V	.
27.667	4861.6416	154.45	.	Q	.	.	V	.
27.750	4862.6143	141.24	.	Q	.	.	V	.
27.833	4863.5078	129.76	.	Q	.	.	V	.
27.917	4864.3315	119.62	.	Q	.	.	V	.
28.000	4865.0947	110.80	.	Q	.	.	V	.
28.083	4865.7988	102.21	.	Q	.	.	V	.

28.167	4866.4482	94.29	.	Q	.	.	.	V
28.250	4867.0439	86.49	.	Q	.	.	.	V
28.333	4867.5884	79.07	.	Q	.	.	.	V
28.417	4868.0845	72.06	.	Q	.	.	.	V
28.500	4868.5327	65.09	.	Q	.	.	.	V
28.583	4868.9414	59.38	.	Q	.	.	.	V
28.667	4869.3179	54.65	.	Q	.	.	.	V
28.750	4869.6621	49.96	.	Q	.	.	.	V
28.833	4869.9741	45.30	.	Q	.	.	.	V
28.917	4870.2568	41.05	.	Q	.	.	.	V
29.000	4870.5186	38.02	.	Q	.	.	.	V
29.083	4870.7603	35.09	.	Q	.	.	.	V
29.167	4870.9819	32.18	.	Q	.	.	.	V
29.250	4871.1836	29.30	.	Q	.	.	.	V
29.333	4871.3657	26.43	.	Q	.	.	.	V
29.417	4871.5283	23.58	.	Q	.	.	.	V
29.500	4871.6733	21.08	.	Q	.	.	.	V
29.583	4871.8120	20.12	.	Q	.	.	.	V
29.667	4871.9453	19.35	.	Q	.	.	.	V
29.750	4872.0732	18.57	.	Q	.	.	.	V
29.833	4872.1958	17.81	.	Q	.	.	.	V
29.917	4872.3135	17.05	.	Q	.	.	.	V
30.000	4872.4258	16.30	.	Q	.	.	.	V
30.083	4872.5327	15.56	.	Q	.	.	.	V
30.167	4872.6348	14.81	.	Q	.	.	.	V
30.250	4872.7319	14.08	.	Q	.	.	.	V
30.333	4872.8237	13.35	.	Q	.	.	.	V
30.417	4872.9106	12.63	.	Q	.	.	.	V
30.500	4872.9927	11.91	.	Q	.	.	.	V
30.583	4873.0698	11.19	.	Q	.	.	.	V
30.667	4873.1421	10.49	.	Q	.	.	.	V
30.750	4873.2095	9.78	.	Q	.	.	.	V
30.833	4873.2720	9.09	.	Q	.	.	.	V
30.917	4873.3296	8.40	.	Q	.	.	.	V
31.000	4873.3828	7.71	.	Q	.	.	.	V
31.083	4873.4312	7.03	.	Q	.	.	.	V
31.167	4873.4751	6.36	.	Q	.	.	.	V
31.250	4873.5142	5.68	.	Q	.	.	.	V
31.333	4873.5488	5.02	.	Q	.	.	.	V
31.417	4873.5786	4.35	.	Q	.	.	.	V
31.500	4873.6040	3.69	.	Q	.	.	.	V
31.583	4873.6250	3.04	.	Q	.	.	.	V
31.667	4873.6416	2.39	.	Q	.	.	.	V
31.750	4873.6538	1.74	.	Q	.	.	.	V
31.833	4873.6616	1.10	.	Q	.	.	.	V
31.917	4873.6646	0.46	.	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%	1915.0
10%	1370.0
20%	740.0
30%	485.0

40%	390.0
50%	325.0
60%	270.0
70%	220.0
80%	165.0
90%	115.0

==========

END OF FLOODSCx ROUTING ANALYSIS

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                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 10-YR EV DEC 2022 ROKAMOTO                                             *
 ************************************************************************

  FILE NAME: EV10126S.DAT
  TIME/DATE OF STUDY: 16:16 12/12/2022


                        ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   50438.699 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.425 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.298; LOW LOSS FRACTION = 0.749
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.33; 30-MINUTE =  0.63;  1-HOUR =  0.88
    3-HOUR =  1.64;    6-HOUR =  2.44; 24-HOUR =  4.29
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.341; 30-MINUTE = 0.392;  1-HOUR = 0.432
    3-HOUR = 0.782;    6-HOUR = 0.902; 24-HOUR = 0.943
==========================================================================
```



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 +------------------------------------------------------------------------------
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 |                                       * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV10126S.DAT   ]
Page:   1 of    |
 +---------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                 | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS    |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +---------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     126.00| Subarea (UH) Added to Stream #1|       0.0      7094.5|
18.250 |             |           |
 +---------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                          |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                  |
 +------------------------------------------------------------------------------
-------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
 * RMV PA-3 ROMP AMENDMENT 2022 - NODE 127                                 *
 * PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL              *
 * 10-YR EV DEC 2022 ROKAMOTO                                              *
 ***************************************************************************

  FILE NAME: EV10127S.DAT
  TIME/DATE OF STUDY: 16:17 12/12/2022


                         ** INPUT SUMMARY **


*****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    127.00 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
=============================================================================
  WATERSHED AREA =   53506.199 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.565 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.287; LOW LOSS FRACTION = 0.748
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.32; 30-MINUTE =  0.63;  1-HOUR =  0.87
    3-HOUR =  1.62;    6-HOUR =  2.40; 24-HOUR =  4.22
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.331; 30-MINUTE = 0.383;  1-HOUR = 0.424
    3-HOUR = 0.773;    6-HOUR = 0.898; 24-HOUR = 0.941
=============================================================================
```



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 +--------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV10127S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     127.00| Subarea (UH) Added to Stream #1|       0.0      7346.0|
18.167 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +--------------------------------------------------------------------------------
--------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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                          Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137                                  *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
* 10-YR EV AUG 2023 ROKAMOTO                                               *
 ************************************************************************

  FILE NAME: EV10137S.DAT
  TIME/DATE OF STUDY: 13:36 08/10/2023

                         ** INPUT SUMMARY **

****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    137.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   67798.297 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.990 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.285; LOW LOSS FRACTION = 0.737
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.31; 30-MINUTE =  0.62;  1-HOUR =  0.85
    3-HOUR =  1.56;    6-HOUR =  2.28; 24-HOUR =  3.97
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933
============================================================================
```



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 +--------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV10137S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+--------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+--------------------+-
-----------+-------------+-----------+
 | 10100.00     137.00| Subarea (UH) Added to Stream #1|       0.0      7527.7|
18.750 |             |           |
 +--------------------+--------------------------------+--------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                            |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                    |
 +--------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
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                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 10-YR EV AUG 2023 ROKAMOTO                                             *
 ************************************************************************

  FILE NAME: EV10138S.DAT
  TIME/DATE OF STUDY: 13:36 08/10/2023


                        ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    138.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   69102.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.094 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284; LOW LOSS FRACTION = 0.737
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.31; 30-MINUTE =  0.62;  1-HOUR =  0.85
    3-HOUR =  1.55;    6-HOUR =  2.27; 24-HOUR =  3.95
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932
==========================================================================
```



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 +--------------------------------------------------------------------------------
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 |                                     * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV10138S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 | 10100.00     138.00| Subarea (UH) Added to Stream #1|       0.0      7506.3|
18.833 |             |           |
 +-------------------+--------------------------------+----------------------+-
----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +--------------------------------------------------------------------------------
-----------------------------------+

   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. 17.0  Release Date: 07/01/2010  License ID 1527

                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139                                  *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL               *
* 10-YR EV AUG 2023 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV10139S.DAT
  TIME/DATE OF STUDY: 13:36 08/10/2023


                        ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    139.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   69529.797 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    3.152 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284; LOW LOSS FRACTION = 0.736
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.31; 30-MINUTE =  0.62;  1-HOUR =  0.85
    3-HOUR =  1.55;    6-HOUR =  2.27; 24-HOUR =  3.95
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932
============================================================================
```



```
 +----------------------------------------------------------------------------
--------------------------------------+
 |                                       * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV10139S.DAT   ]
Page:   1 of    |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     139.00| Subarea (UH) Added to Stream #1|       0.0      7481.9|
18.917 |             |           |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                          |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                  |
 +----------------------------------------------------------------------------
--------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJJO - SINGLE AREA UH                                 *
* PHASE CONDITION NO PA4&5 - REGIONAL NODE 119                           *
* 25-YR EV JANUARY 2019 ROKAMOTO                                         *
 ************************************************************************

  FILE NAME: EV25119S.DAT
  TIME/DATE OF STUDY: 14:57 01/02/2019


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    119.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==========================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   49511.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.119 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.298
         LOW LOSS FRACTION = 0.433
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.42
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.78
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.08
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.02
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.00
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.30

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.345
          30-MINUTE FACTOR = 0.395
           1-HOUR FACTOR = 0.435
           3-HOUR FACTOR = 0.785
           6-HOUR FACTOR = 0.904
          24-HOUR FACTOR = 0.944

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   3.933
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.225	1345.610
2	0.674	2691.224
3	1.124	2691.219
4	1.573	2691.225
5	2.058	2903.672
6	2.718	3953.231
7	3.402	4095.334
8	4.199	4769.131
9	5.417	7296.268
10	6.889	8810.803
11	8.696	10823.149
12	10.737	12219.630
13	12.704	11780.229
14	15.066	14140.104
15	17.479	14452.578
16	19.600	12698.690
17	22.168	15375.438
18	24.894	16321.384
19	27.152	13521.690
20	29.888	16385.375
21	32.903	18051.443
22	36.067	18948.395
23	38.760	16121.541
24	42.425	21945.736
25	46.006	21442.395
26	50.026	24071.645
27	53.062	18182.006
28	55.810	16450.873
29	58.990	19044.420
30	62.814	22894.926
31	65.775	17729.420
32	68.507	16362.248
33	71.205	16155.530
34	73.661	14703.204
35	76.009	14060.894
36	77.827	10882.644
37	79.578	10486.339
38	81.397	10893.060
39	83.119	10311.645
40	84.701	9472.301
41	86.142	8626.241
42	87.371	7360.899
43	88.444	6427.127
44	89.370	5540.958
45	90.262	5344.655
46	91.092	4967.766
47	91.914	4919.387
48	92.677	4568.492

49	93.426	4485.987
50	94.108	4083.013
51	94.616	3043.712
52	95.115	2990.171
53	95.615	2991.633
54	96.063	2685.325
55	96.379	1889.883
56	96.687	1846.712
57	96.996	1846.712
58	97.304	1846.757
59	97.613	1846.712
60	97.914	1805.094
61	98.055	844.552
62	98.129	440.161
63	98.202	440.115
64	98.276	443.085
65	98.350	443.085
66	98.423	437.146
67	98.497	443.130
68	98.571	443.085
69	98.645	443.085
70	98.718	437.146
71	98.793	446.100
72	98.866	437.146
73	98.940	446.054
74	99.013	437.146
75	99.086	437.146
76	99.159	437.146
77	99.232	437.146
78	99.305	437.146
79	99.378	437.146
80	99.451	437.146
81	99.524	437.146
82	99.597	437.146
83	99.670	437.146
84	99.743	437.146
85	99.816	437.146
86	99.889	437.146
87	99.962	437.146
88	100.000	225.585

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 8780.0312

TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 11847.3945

==========

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. 3750.0 7500.0 11250.0 15000.0
0.083	0.0403	5.85	Q . . . .
0.167	0.1612	17.56	Q . . . .
0.250	0.3630	29.30	Q . . . .
0.333	0.6460	41.08	Q . . . .
0.417	1.0167	53.82	Q . . . .
0.500	1.5067	71.16	Q . . . .
0.583	2.1208	89.16	Q . . . .
0.667	2.8794	110.15	Q . . . .
0.750	3.8586	142.18	Q . . . .
0.833	5.1044	180.89	Q . . . .
0.917	6.6777	228.45	Q . . . .
1.000	8.6214	282.23	Q . . . .
1.083	10.9234	334.25	Q . . . .
1.167	13.6555	396.69	VQ . . . .
1.250	16.8281	460.67	VQ . . . .
1.333	20.3902	517.22	VQ . . . .
1.417	24.4232	585.58	VQ . . . .
1.500	28.9566	658.26	VQ . . . .
1.583	33.9083	718.99	VQ . . . .
1.667	39.3653	792.36	V Q . . . .
1.750	45.3790	873.18	V Q . . . .
1.833	51.9780	958.17	V Q . . . .
1.917	59.0793	1031.11	V Q . . . .
2.000	66.8591	1129.63	V Q . . . .
2.083	75.3042	1226.22	V Q . . . .
2.167	84.4956	1334.59	V Q . . . .
2.250	94.2588	1417.63	V Q . . . .
2.333	104.5447	1493.50	V Q . . . .
2.417	115.4318	1580.81	V Q . . . .
2.500	127.0380	1685.22	V Q . . . .
2.583	139.2102	1767.41	V Q . . . .
2.667	151.9102	1844.04	V Q . . . .
2.750	165.1328	1919.92	V Q . . . .
2.833	178.8371	1989.86	V Q . . . .
2.917	193.0047	2057.13	V Q . . . .
3.000	207.5428	2110.94	V Q . . . .
3.083	222.4403	2163.12	V Q . . . .
3.167	237.7114	2217.36	V Q . . . .
3.250	253.3393	2269.17	V Q . . . .
3.333	269.3009	2317.63	V Q . . . .
3.417	285.5715	2362.50	V Q . . . .
3.500	302.1152	2402.14	.V Q . . . .
3.583	318.9044	2437.80	.V Q . . . .
3.667	335.9145	2469.86	.V Q . . . .
3.750	353.1397	2501.10	.V Q . . . .
3.833	370.5705	2530.95	.V Q . . . .
3.917	388.2057	2560.64	.V Q . . . .

4.000	406.0366	2589.03	.V	Q	.	.	.	.
4.083	424.0607	2617.10	.V	Q	.	.	.	.
4.167	442.2678	2643.67	.V	Q	.	.	.	.
4.250	460.6269	2665.75	.V	Q	.	.	.	.
4.333	479.1381	2687.82	.V	Q	.	.	.	.
4.417	497.8015	2709.93	.V	Q	.	.	.	.
4.500	516.6096	2730.93	.V	Q	.	.	.	.
4.583	535.5385	2748.48	.V	Q	.	.	.	.
4.667	554.5887	2766.09	.V	Q	.	.	.	.
4.750	573.7601	2783.69	.V	Q	.	.	.	.
4.833	593.0543	2801.52	. V	Q	.	.	.	.
4.917	612.4714	2819.36	. V	Q	.	.	.	.
5.000	632.0118	2837.26	. V	Q	.	.	.	.
5.083	651.6467	2850.99	. V	Q	.	.	.	.
5.167	671.3657	2863.19	. V	Q	.	.	.	.
5.250	691.1686	2875.38	. V	Q	.	.	.	.
5.333	711.0571	2887.82	. V	Q	.	.	.	.
5.417	731.0313	2900.25	. V	Q	.	.	.	.
5.500	751.0925	2912.89	. V	Q	.	.	.	.
5.583	771.2409	2925.54	. V	Q	.	.	.	.
5.667	791.4781	2938.45	. V	Q	.	.	.	.
5.750	811.8042	2951.34	. V	Q	.	.	.	.
5.833	832.2206	2964.46	. V	Q	.	.	.	.
5.917	852.7275	2977.61	. V	Q	.	.	.	.
6.000	873.3267	2990.99	. V	Q	.	.	.	.
6.083	894.0181	3004.40	. V	Q	.	.	.	.
6.167	914.8034	3018.03	. V	Q	.	.	.	.
6.250	935.6826	3031.66	. V	Q	.	.	.	.
6.333	956.6576	3045.57	. V	Q	.	.	.	.
6.417	977.7283	3059.47	. V	Q	.	.	.	.
6.500	998.8968	3073.66	. V	Q	.	.	.	.
6.583	1020.1630	3087.85	. V	Q	.	.	.	.
6.667	1041.5289	3102.33	. V	Q	.	.	.	.
6.750	1062.9946	3116.81	. V	Q	.	.	.	.
6.833	1084.5621	3131.59	. V	Q	.	.	.	.
6.917	1106.2313	3146.38	. V	Q	.	.	.	.
7.000	1128.0046	3161.48	. V	Q	.	.	.	.
7.083	1149.8818	3176.58	. V	Q	.	.	.	.
7.167	1171.8654	3192.00	. V	Q	.	.	.	.
7.250	1193.9551	3207.43	. V	Q	.	.	.	.
7.333	1216.1471	3222.27	. V	Q	.	.	.	.
7.417	1238.4346	3236.14	. V	Q	.	.	.	.
7.500	1260.8199	3250.35	. V	Q	.	.	.	.
7.583	1283.3031	3264.56	. V	Q	.	.	.	.
7.667	1305.8866	3279.13	. V	Q	.	.	.	.
7.750	1328.5704	3293.70	. V	Q	.	.	.	.
7.833	1351.3572	3308.64	. V	Q	.	.	.	.
7.917	1374.2468	3323.57	. V	Q	.	.	.	.
8.000	1397.2421	3338.90	. V	Q	.	.	.	.
8.083	1420.3429	3354.23	. V	Q	.	.	.	.
8.167	1443.5520	3369.97	. V	Q	.	.	.	.
8.250	1466.8695	3385.70	. V	Q.	.	.	.	.
8.333	1490.2982	3401.85	. V	Q.	.	.	.	.
8.417	1513.8383	3418.02	. V	Q.	.	.	.	.
8.500	1537.4927	3434.61	. V	Q.	.	.	.	.
8.583	1561.2615	3451.22	. V	Q.	.	.	.	.
8.667	1585.1477	3468.27	. V	Q.	.	.	.	.
8.750	1609.1515	3485.35	. V	Q.	.	.	.	.

8.833	1633.2760	3502.89	.	V	Q.	.	.	.
8.917	1657.5215	3520.45	.	V	Q.	.	.	.
9.000	1681.8912	3538.49	.	V	Q.	.	.	.
9.083	1706.3855	3556.56	.	V	Q.	.	.	.
9.167	1731.0077	3575.14	.	V	Q.	.	.	.
9.250	1755.7581	3593.75	.	V	Q.	.	.	.
9.333	1780.6401	3612.88	.	V	Q.	.	.	.
9.417	1805.6543	3632.05	.	V	Q.	.	.	.
9.500	1830.8042	3651.76	.	V	Q.	.	.	.
9.583	1856.0902	3671.53	.	V	Q.	.	.	.
9.667	1881.5162	3691.86	.	V	Q.	.	.	.
9.750	1907.0826	3712.25	.	V	Q.	.	.	.
9.833	1932.7936	3733.23	.	V	Q.	.	.	.
9.917	1958.6494	3754.28	.	V	Q	.	.	.
10.000	1984.6545	3775.94	.	V	Q	.	.	.
10.083	2010.8093	3797.68	.	V	Q	.	.	.
10.167	2037.1183	3820.06	.	V	Q	.	.	.
10.250	2063.5820	3842.53	.	V	Q	.	.	.
10.333	2090.2051	3865.68	.	V	Q	.	.	.
10.417	2116.9883	3888.93	.	V	Q	.	.	.
10.500	2143.9365	3912.88	.	V	Q	.	.	.
10.583	2171.0505	3936.95	.	V	Q	.	.	.
10.667	2198.3354	3961.75	.	V	Q	.	.	.
10.750	2225.7920	3986.69	.	V	Q	.	.	.
10.833	2253.4255	4012.40	.	V	Q	.	.	.
10.917	2281.2373	4038.26	.	V	Q	.	.	.
11.000	2309.2327	4064.94	.	V	Q	.	.	.
11.083	2337.4131	4091.78	.	V	Q	.	.	.
11.167	2365.7842	4119.48	.	V	Q	.	.	.
11.250	2394.3474	4147.37	.	V	.Q	.	.	.
11.333	2423.1089	4176.17	.	V	.Q	.	.	.
11.417	2452.0701	4205.17	.	V	.Q	.	.	.
11.500	2481.2375	4235.13	.	V	.Q	.	.	.
11.583	2510.6130	4265.33	.	V	.Q	.	.	.
11.667	2540.2036	4296.54	.	V	.Q	.	.	.
11.750	2570.0107	4328.01	.	V	.Q	.	.	.
11.833	2600.0422	4360.56	.	V	.Q	.	.	.
11.917	2630.2998	4393.40	.	V	.Q	.	.	.
12.000	2660.7915	4427.40	.	V	.Q	.	.	.
12.083	2691.5859	4471.34	.	V	.Q	.	.	.
12.167	2722.7576	4526.11	.	V	. Q	.	.	.
12.250	2754.3081	4581.15	.	V	. Q	.	.	.
12.333	2786.2461	4637.40	.	V	. Q	.	.	.
12.417	2818.5840	4695.48	.	V	. Q	.	.	.
12.500	2851.3826	4762.35	.	V	. Q	.	.	.
12.583	2884.6509	4830.56	.	V	. Q	.	.	.
12.667	2918.4314	4904.91	.	V	. Q	.	.	.
12.750	2952.8508	4997.69	.	V	. Q	.	.	.
12.833	2987.9929	5102.63	.	V	Q	.	.	.
12.917	3023.9585	5222.19	.	V	Q	.	.	.
13.000	3060.8254	5353.07	.	V	Q	.	.	.
13.083	3098.5730	5480.94	.	V	Q	.	.	.
13.167	3137.3267	5627.05	.	V	Q	.	.	.
13.250	3177.1030	5775.53	.	V	Q	.	.	.
13.333	3217.8247	5912.80	.	V	Q	.	.	.
13.417	3259.6250	6069.41	.	V	Q	.	.	.
13.500	3302.5608	6234.26	.	V	Q	.	.	.
13.583	3346.4944	6379.16	.	V	Q	.	.	.

13.667	3391.5781	6546.16	. .V Q . . .
13.750	3437.8953	6725.26	. .V Q . . .
13.833	3485.5010	6912.35	. .V Q . . .
13.917	3534.2568	7079.35	. .V Q . . .
14.000	3584.4617	7289.75	. . V Q. . .
14.083	3636.1672	7507.67	. . V Q . .
14.167	3689.5876	7756.64	. . V Q . .
14.250	3744.4282	7962.85	. . V .Q . .
14.333	3800.6099	8157.56	. . V .Q . .
14.417	3858.2700	8372.24	. . V . Q . .
14.500	3917.6636	8623.95	. . V . Q . .
14.583	3978.5386	8839.04	. . V . Q . .
14.667	4040.8689	9050.35	. . V . Q . .
14.750	4104.7803	9279.92	. . V . Q . .
14.833	4170.2847	9511.23	. . V . Q . .
14.917	4237.4482	9752.14	. . V . Q . .
15.000	4306.1846	9980.51	. . V . Q . .
15.083	4376.4268	10199.14	. . V . Q . .
15.167	4448.3154	10438.25	. . V . Q . .
15.250	4521.8125	10671.81	. . V . Q . .
15.333	4596.7593	10882.30	. . V . Q. .
15.417	4673.1372	11090.11	. . V . Q. .
15.500	4750.8252	11280.32	. . V . Q .
15.583	4829.6040	11438.67	. . V . Q .
15.667	4909.5942	11614.59	. . V . Q .
15.750	4990.8086	11792.34	. . V . .Q .
15.833	5073.1606	11957.51	. . V . .Q .
15.917	5156.5161	12103.22	. . V . . Q .
16.000	5241.2437	12302.43	. . V . . Q .
16.083	5328.0000	12597.01	. . V . . Q .
16.167	5416.6548	12872.68	. . V . . Q .
16.250	5505.7476	12936.26	. . V . . Q .
16.333	5595.0986	12973.75	. . V . . Q .
16.417	5685.1113	13069.85	. . V. . Q .
16.500	5776.4351	13260.17	. . V. . Q .
16.583	5868.1748	13320.62	. . V. . Q .
16.667	5960.8789	13460.63	. . V . Q .
16.750	6055.6357	13758.72	. . V . Q .
16.833	6151.6113	13935.68	. . V . Q .
16.917	6249.2744	14180.65	. . .V . Q .
17.000	6347.8140	14307.94	. . .V . Q .
17.083	6445.9111	14243.73	. . .V . Q .
17.167	6545.2539	14424.60	. . . V . Q .
17.250	6644.8164	14456.50	. . . V . Q .
17.333	6743.0000	14256.26	. . . V . Q .
17.417	6842.5874	14460.08	. . . V . Q .
17.500	6942.1382	14454.80	. . . V . Q .
17.583	7040.0288	14213.74	. . . V . Q .
17.667	7139.8789	14498.24	. . . V . Q .
17.750	7240.5107	14611.76	. . . V . Q .
17.833	7341.0498	14598.24	. . . V . Q .
17.917	7439.6172	14311.98	. . . V . Q .
18.000	7542.1016	14880.73	. . . V . Q.
18.083	7643.9424	14787.31	. . . V . Q.
18.167	7746.6890	14918.78	. . . V . Q.
18.250	7844.6543	14224.56	. . . V . Q .
18.333	7941.8721	14116.00	. . . V . Q .
18.417	8040.9233	14382.24	. . . V . Q .

18.500	8142.1982	14705.13	. . . V . Q.
18.583	8239.4551	14121.75	. . . V . Q .
18.667	8335.1738	13898.36	. . . V . Q .
18.750	8429.9727	13764.85	. . . V . Q .
18.833	8523.1895	13535.10	. . . V . Q .
18.917	8615.0654	13340.41	. . . V. Q .
19.000	8703.6025	12855.53	. . . V. Q .
19.083	8790.7471	12653.42	. . . V. Q .
19.167	8876.5801	12462.90	. . . V. Q .
19.250	8960.6553	12207.68	. . . V Q .
19.333	9042.7344	11917.94	. . . VQ .
19.417	9122.4180	11570.10	. . . Q .
19.500	9199.1855	11146.67	. . . Q.V .
19.583	9273.7168	10821.92	. . . Q .V .
19.667	9345.9541	10488.85	. . . Q .V .
19.750	9416.2305	10204.10	. . . Q .V .
19.833	9484.3965	9897.64	. . . Q . V .
19.917	9550.8477	9648.67	. . . Q . V .
20.000	9615.1787	9340.86	. . . Q . V .
20.083	9677.5400	9054.89	. . . Q . V .
20.167	9737.4941	8705.38	. . . Q . V .
20.250	9794.9980	8349.61	. . . Q . V .
20.333	9850.8330	8107.30	. . .Q . V .
20.417	9904.9736	7861.27	. . Q . V .
20.500	9957.0791	7565.67	. . Q . V .
20.583	10007.0898	7261.55	. . Q. . V .
20.667	10055.6426	7049.85	. . Q . . V .
20.750	10102.8145	6849.34	. . Q . . V .
20.833	10148.6914	6661.37	. . Q . . V .
20.917	10193.2129	6464.57	. . Q . . V .
21.000	10236.4629	6279.92	. . Q . . V .
21.083	10277.8760	6013.21	. . Q . . V .
21.167	10317.8809	5808.77	. . Q . . V .
21.250	10356.8525	5658.74	. . Q . . V .
21.333	10394.8467	5516.79	. . Q . . V .
21.417	10431.8408	5371.51	. . Q . . V .
21.500	10467.8896	5234.29	. . Q . . V .
21.583	10503.0977	5112.27	. . Q . . V .
21.667	10537.5166	4997.69	. . Q . . V .
21.750	10571.1650	4885.80	. . Q . . V .
21.833	10604.0664	4777.31	. . Q . . V .
21.917	10636.2412	4671.83	. . Q . . V .
22.000	10667.7061	4568.64	. . Q . . V .
22.083	10698.5381	4476.83	. .Q . . V .
22.167	10728.7793	4391.09	. .Q . . V .
22.250	10758.5010	4315.60	. .Q . . V .
22.333	10787.7168	4242.10	. .Q . . V .
22.417	10816.4385	4170.32	. .Q . . V .
22.500	10844.6904	4102.25	. Q . . V .
22.583	10872.5234	4041.33	. Q . . V .
22.667	10899.9639	3984.42	. Q . . V .
22.750	10927.0381	3931.15	. Q . . V .
22.833	10953.7510	3878.74	. Q . . V .
22.917	10980.1074	3826.94	. Q . . V .
23.000	11006.1201	3777.10	. Q . . V .
23.083	11031.8467	3735.51	. Q. . . V .
23.167	11057.3027	3696.28	. Q. . . V .
23.250	11082.4756	3655.15	. Q. . . V .

23.333	11107.2275	3594.02	. Q.	.	.	V	.
23.417	11131.5723	3534.83	. Q.	.	.	V	.
23.500	11155.6729	3499.47	. Q.	.	.	V	.
23.583	11179.5381	3465.28	. Q.	.	.	V	.
23.667	11203.1631	3430.32	. Q.	.	.	V	.
23.750	11226.5361	3393.78	. Q.	.	.	V	.
23.833	11249.6611	3357.74	. Q .	.	.	V	.
23.917	11272.5410	3322.11	. Q .	.	.	V	.
24.000	11295.1787	3287.01	. Q .	.	.	V	.
24.083	11317.5371	3246.47	. Q .	.	.	V	.
24.167	11339.5801	3200.64	. Q .	.	.	V	.
24.250	11361.3105	3155.32	. Q .	.	.	V	.
24.333	11382.7451	3112.25	. Q .	.	.	V	.
24.417	11403.8936	3070.73	. Q .	.	.	V	.
24.500	11424.7295	3025.36	. Q .	.	.	V	.
24.583	11445.2539	2980.09	. Q .	.	.	V	.
24.667	11465.4502	2932.56	. Q .	.	.	V	.
24.750	11485.2490	2874.73	. Q .	.	.	V	.
24.833	11504.6084	2811.04	. Q .	.	.	V	.
24.917	11523.4746	2739.34	. Q .	.	.	V	.
25.000	11541.8105	2662.32	. Q .	.	.	V	.
25.083	11559.6338	2587.95	. Q .	.	.	V	.
25.167	11576.8799	2504.08	. Q .	.	.	V	.
25.250	11593.5439	2419.60	. Q .	.	.	V	.
25.333	11609.6943	2345.00	. Q .	.	.	V	.
25.417	11625.2666	2261.10	. Q .	.	.	V	.
25.500	11640.2383	2173.86	. Q .	.	.	V	.
25.583	11654.6982	2099.52	. Q .	.	.	V	.
25.667	11668.5645	2013.42	. Q .	.	.	V	.
25.750	11681.7930	1920.82	. Q .	.	.	V	.
25.833	11694.3623	1825.08	. Q .	.	.	V	.
25.917	11706.3623	1742.35	. Q .	.	.	V	.
26.000	11717.6230	1635.01	. Q .	.	.	V	.
26.083	11728.1650	1530.65	. Q .	.	.	V	.
26.167	11737.9150	1415.65	. Q .	.	.	V	.
26.250	11747.0547	1327.01	. Q .	.	.	V	.
26.333	11755.6396	1246.53	. Q .	.	.	V	.
26.417	11763.5967	1155.39	. Q .	.	.	V	.
26.500	11770.8154	1048.19	. Q .	.	.	V	.
26.583	11777.4551	964.13	. Q .	.	.	V	.
26.667	11783.5605	886.58	. Q .	.	.	V	.
26.750	11789.1426	810.46	. Q .	.	.	V	.
26.833	11794.2471	741.16	.Q .	.	.	V	.
26.917	11798.8965	675.13	.Q .	.	.	V	.
27.000	11803.1895	623.34	.Q .	.	.	V	.
27.083	11807.1396	573.62	.Q .	.	.	V	.
27.167	11810.7383	522.49	.Q .	.	.	V	.
27.250	11814.0039	474.22	.Q .	.	.	V	.
27.333	11816.9648	429.92	.Q .	.	.	V	.
27.417	11819.6484	389.59	.Q .	.	.	V	.
27.500	11822.0938	355.02	Q .	.	.	V	.
27.583	11824.3301	324.74	Q .	.	.	V	.
27.667	11826.3857	298.51	Q .	.	.	V	.
27.750	11828.2676	273.31	Q .	.	.	V	.
27.833	11829.9883	249.92	Q .	.	.	V	.
27.917	11831.5508	226.89	Q .	.	.	V	.
28.000	11832.9668	205.55	Q .	.	.	V	.
28.083	11834.2393	184.70	Q .	.	.	V	.

28.167	11835.3809	165.75	Q .	.	.	V	.
28.250	11836.4238	151.42	Q .	.	.	V	.
28.333	11837.3701	137.43	Q .	.	.	V	.
28.417	11838.2207	123.52	Q .	.	.	V	.
28.500	11838.9854	111.04	Q .	.	.	V	.
28.583	11839.6885	102.09	Q .	.	.	V	.
28.667	11840.3320	93.39	Q .	.	.	V	.
28.750	11840.9160	84.75	Q .	.	.	V	.
28.833	11841.4404	76.16	Q .	.	.	V	.
28.917	11841.9062	67.63	Q .	.	.	V	.
29.000	11842.3154	59.34	Q .	.	.	V	.
29.083	11842.6963	55.28	Q .	.	.	V	.
29.167	11843.0615	52.99	Q .	.	.	V	.
29.250	11843.4111	50.72	Q .	.	.	V	.
29.333	11843.7451	48.46	Q .	.	.	V	.
29.417	11844.0635	46.21	Q .	.	.	V	.
29.500	11844.3662	44.01	Q .	.	.	V	.
29.583	11844.6543	41.80	Q .	.	.	V	.
29.667	11844.9268	39.60	Q .	.	.	V	.
29.750	11845.1846	37.42	Q .	.	.	V	.
29.833	11845.4277	35.29	Q .	.	.	V	.
29.917	11845.6562	33.13	Q .	.	.	V	.
30.000	11845.8701	31.02	Q .	.	.	V	.
30.083	11846.0693	28.89	Q .	.	.	V	.
30.167	11846.2539	26.81	Q .	.	.	V	.
30.250	11846.4248	24.74	Q .	.	.	V	.
30.333	11846.5811	22.69	Q .	.	.	V	.
30.417	11846.7236	20.66	Q .	.	.	V	.
30.500	11846.8516	18.63	Q .	.	.	V	.
30.583	11846.9658	16.62	Q .	.	.	V	.
30.667	11847.0664	14.63	Q .	.	.	V	.
30.750	11847.1533	12.64	Q .	.	.	V	.
30.833	11847.2266	10.67	Q .	.	.	V	.
30.917	11847.2861	8.71	Q .	.	.	V	.
31.000	11847.3330	6.76	Q .	.	.	V	.
31.083	11847.3662	4.82	Q .	.	.	V	.
31.167	11847.3857	2.90	Q .	.	.	V	.
31.250	11847.3926	0.98	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%	1875.0
10%	1430.0
20%	1115.0
30%	600.0
40%	465.0
50%	390.0
60%	330.0
70%	270.0
80%	210.0
90%	135.0

END OF FLOODSCx ROUTING ANALYSIS

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

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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 25-YR EV DEC 2022 ROKAMOTO                                             *
 **************************************************************************

  FILE NAME: EV25126S.DAT
  TIME/DATE OF STUDY: 16:02 12/12/2022


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   50438.699 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.211 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.298; LOW LOSS FRACTION = 0.436
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.41; 30-MINUTE =  0.78;  1-HOUR =  1.08
    3-HOUR =  2.01;    6-HOUR =  2.99; 24-HOUR =  5.27
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.341; 30-MINUTE = 0.392;  1-HOUR = 0.432
    3-HOUR = 0.782;    6-HOUR = 0.902; 24-HOUR = 0.943
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV25126S.DAT   ]
Page:   1 of    |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                 | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     126.00| Subarea (UH) Added to Stream #1|       0.0     14871.9|
18.250 |             |           |
 +-------------------+---------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:






 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127                                   *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
* 25-YR EV DEC 2022 ROKAMOTO                                                *
 **************************************************************************

  FILE NAME: EV25127S.DAT
  TIME/DATE OF STUDY: 16:03 12/12/2022


                         ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    127.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   53506.199 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.334 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.287; LOW LOSS FRACTION = 0.449
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.41; 30-MINUTE =  0.77;  1-HOUR =  1.08
    3-HOUR =  1.99;    6-HOUR =  2.94; 24-HOUR =  5.18
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.331; 30-MINUTE = 0.383;  1-HOUR = 0.424
    3-HOUR = 0.773;    6-HOUR = 0.898; 24-HOUR = 0.941
============================================================================
```



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 +--------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV25127S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     127.00| Subarea (UH) Added to Stream #1|       0.0     14910.8|
18.167 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                              |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                      |
 +--------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
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                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137                                  *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
* 25-YR EV AUG 2023 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV25137S.DAT
  TIME/DATE OF STUDY: 13:30 08/10/2023


                        ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    137.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   67798.297 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.709 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.285; LOW LOSS FRACTION = 0.450
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.40; 30-MINUTE =  0.76;  1-HOUR =  1.04
    3-HOUR =  1.90;    6-HOUR =  2.79; 24-HOUR =  4.86
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933
============================================================================
```



```
 +----------------------------------------------------------------------------
-----------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV25137S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     137.00| Subarea (UH) Added to Stream #1|       0.0     16721.3|
18.500 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                           |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                   |
 +----------------------------------------------------------------------------
-----------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
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                          Analysis prepared by:




 ************************** DESCRIPTION OF STUDY **************************
 * RMV PA-3 ROMP AMENDMENT 2022 - NODE 138                                *
 * PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
 * 25-YR EV AUG 2023 ROKAMOTO                                             *
 **************************************************************************

  FILE NAME: EV25138S.DAT
  TIME/DATE OF STUDY: 13:29 08/10/2023


                         ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    138.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   69102.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.802 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284; LOW LOSS FRACTION = 0.451
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.40; 30-MINUTE =  0.76;  1-HOUR =  1.04
    3-HOUR =  1.90;    6-HOUR =  2.78; 24-HOUR =  4.84
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932
============================================================================
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 +--------------------------------------------------------------------------
------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV25138S.DAT   ]
Page:   1 of    |
 +---------------------+--------------------------------+---------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +---------------------+--------------------------------+---------------------+-
-----------+-------------+-----------+
 | 10100.00     138.00| Subarea (UH) Added to Stream #1|       0.0     16809.8|
17.917 |             |           |
 +---------------------+--------------------------------+---------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                               |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                       |
 +--------------------------------------------------------------------------
------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

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

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2010 Advanced Engineering Software (aes)
             Ver. 17.0  Release Date: 07/01/2010  License ID 1527

                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 25-YR EV AUG 2023 ROKAMOTO                                             *
 **************************************************************************

  FILE NAME: EV25139S.DAT
  TIME/DATE OF STUDY: 13:29 08/10/2023


                        ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    139.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   69529.797 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.854 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284; LOW LOSS FRACTION = 0.451
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.40; 30-MINUTE =  0.76;  1-HOUR =  1.04
    3-HOUR =  1.89;    6-HOUR =  2.77; 24-HOUR =  4.83
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932
==========================================================================
```



```
 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV25139S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     139.00| Subarea (UH) Added to Stream #1|       0.0     16800.8|
17.917 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
```

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

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                          Analysis prepared by:

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


 ************************* DESCRIPTION OF STUDY *************************
* RANCHO MISSION VIEJJO - SINGLE AREA UH                                 *
* PHASE CONDITION NO PA4&5 - REGIONAL NODE 119                             *
* 50-YR EV DECEMBER 2018 FKAZI                                           *
 ************************************************************************

  FILE NAME: EV50119S.DAT
  TIME/DATE OF STUDY: 16:49 12/20/2018


******************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    119.00 IS CODE =   1
------------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS)<<<<<
==============================================================================

      (UNIT-HYDROGRAPH ADDED TO STREAM #1)

         WATERSHED AREA =   49511.801 ACRES
         BASEFLOW =   0.000 CFS/SQUARE-MILE
         *USER ENTERED "LAG" TIME =    2.043 HOURS
         VALLEY(DEVELOPED) S-GRAPH SELECTED
         MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.298
         LOW LOSS FRACTION = 0.399
         *HYDROGRAPH MODEL #1 SPECIFIED*

         SPECIFIED PEAK  5-MINUTES RAINFALL(INCH)=  0.46
         SPECIFIED PEAK 30-MINUTES RAINFALL(INCH)=  0.87
         SPECIFIED PEAK  1-HOUR RAINFALL(INCH) =  1.21
         SPECIFIED PEAK  3-HOUR RAINFALL(INCH) =  2.28
         SPECIFIED PEAK  6-HOUR RAINFALL(INCH) =  3.40
         SPECIFIED PEAK 24-HOUR RAINFALL(INCH) =  5.99

         *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
           5-MINUTE FACTOR = 0.345
          30-MINUTE FACTOR = 0.395
           1-HOUR FACTOR = 0.435
           3-HOUR FACTOR = 0.785
           6-HOUR FACTOR = 0.904
          24-HOUR FACTOR = 0.944

         UNIT HYDROGRAPH TIME UNIT =   5.000 MINUTES
         UNIT INTERVAL PERCENTAGE OF LAG-TIME =   4.079
```


UNIT HYDROGRAPH DETERMINATION

INTERVAL NUMBER	"S" GRAPH MEAN VALUES	UNIT HYDROGRAPH ORDINATES(CFS)
1	0.233	1395.669
2	0.699	2791.335
3	1.165	2791.336
4	1.632	2791.338
5	2.159	3158.093
6	2.858	4186.319
7	3.568	4247.679
8	4.513	5661.958
9	5.841	7952.543
10	7.482	9826.797
11	9.504	12103.970
12	11.579	12426.468
13	13.678	12570.965
14	16.386	16214.005
15	18.611	13319.232
16	20.992	14260.268
17	23.920	17529.359
18	26.361	14618.758
19	28.979	15674.128
20	31.997	18070.709
21	35.430	20555.449
22	38.098	15975.902
23	41.854	22493.459
24	45.545	22102.980
25	49.687	24796.664
26	52.917	19341.752
27	55.772	17096.588
28	59.079	19798.701
29	63.017	23583.332
30	66.033	18057.633
31	68.904	17194.602
32	71.611	16209.025
33	74.182	15390.147
34	76.492	13835.034
35	78.322	10956.422
36	80.152	10960.352
37	82.034	11264.284
38	83.762	10349.699
39	85.348	9494.549
40	86.729	8270.961
41	87.949	7304.799
42	88.947	5979.428
43	89.899	5697.698
44	90.776	5249.771
45	91.634	5140.039
46	92.446	4861.963
47	93.223	4653.372
48	93.968	4456.979

49	94.518	3295.794
50	95.036	3100.816
51	95.554	3100.816
52	96.032	2861.389
53	96.364	1991.255
54	96.684	1916.653
55	97.004	1915.283
56	97.324	1915.237
57	97.644	1916.699
58	97.945	1804.866
59	98.068	731.120
60	98.144	460.170
61	98.221	455.876
62	98.297	458.754
63	98.374	461.587
64	98.450	455.876
65	98.527	458.754
66	98.604	458.754
67	98.680	455.876
68	98.756	458.708
69	98.833	458.754
70	98.910	458.754
71	98.986	455.876
72	99.062	458.754
73	99.138	455.876
74	99.215	455.876
75	99.291	455.876
76	99.367	455.876
77	99.443	455.876
78	99.519	455.876
79	99.595	455.876
80	99.671	455.876
81	99.748	455.876
82	99.824	455.876
83	99.900	455.876
84	99.976	455.876
85	100.000	143.949

TOTAL SOIL-LOSS VOLUME(ACRE-FEET) = 9145.7021
TOTAL STORM RUNOFF VOLUME(ACRE-FEET) = 14167.2832

==========

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. 4475.0 8950.0 13425.0 17900.0
0.083	0.0500	7.25	Q . . . .
0.167	0.1999	21.78	Q . . . .
0.250	0.4502	36.34	Q . . . .
0.333	0.8011	50.95	Q . . . .
0.417	1.2660	67.50	Q . . . .
0.500	1.8821	89.45	Q . . . .
0.583	2.6519	111.78	Q . . . .
0.667	3.6267	141.53	Q . . . .
0.750	4.8888	183.27	Q . . . .
0.833	6.5063	234.87	Q . . . .
0.917	8.5618	298.44	Q . . . .
1.000	11.0679	363.89	Q . . . .
1.083	14.0312	430.28	Q . . . .
1.167	17.5836	515.80	VQ . . . .
1.250	21.6230	586.52	VQ . . . .
1.333	26.1848	662.38	VQ . . . .
1.417	31.3875	755.43	VQ . . . .
1.500	37.1289	833.65	VQ . . . .
1.583	43.4484	917.59	V Q . . . .
1.667	50.4335	1014.25	V Q . . . .
1.750	58.1753	1124.11	V Q . . . .
1.833	66.5121	1210.50	V Q . . . .
1.917	75.6792	1331.07	V Q . . . .
2.000	85.6649	1449.92	V Q . . . .
2.083	96.5685	1583.20	V Q . . . .
2.167	108.1971	1688.47	V Q . . . .
2.250	120.4734	1782.52	V Q . . . .
2.333	133.4956	1890.82	V Q . . . .
2.417	147.4021	2019.22	V Q . . . .
2.500	161.9971	2119.21	V Q . . . .
2.583	177.2532	2215.17	V Q . . . .
2.667	193.1361	2306.20	V Q . . . .
2.750	209.6197	2393.42	V Q . . . .
2.833	226.6495	2472.72	V Q . . . .
2.917	244.1253	2537.48	V Q . . . .
3.000	262.0479	2602.36	V Q . . . .
3.083	280.4308	2669.20	V Q . . . .
3.167	299.2419	2731.39	V Q . . . .
3.250	318.4534	2789.50	V Q . . . .
3.333	338.0219	2841.35	V Q . . . .
3.417	357.9153	2888.52	.V Q . . . .
3.500	378.0865	2928.86	.V Q . . . .
3.583	398.5276	2968.06	.V Q . . . .
3.667	419.2230	3004.96	.V Q . . . .
3.750	440.1706	3041.60	.V Q . . . .
3.833	461.3609	3076.83	.V Q . . . .
3.917	482.7884	3111.28	.V Q . . . .

4.000	504.4463	3144.73	.V	Q	.	.	.	.
4.083	526.2952	3172.46	.V	Q	.	.	.	.
4.167	548.3282	3199.19	.V	Q	.	.	.	.
4.250	570.5472	3226.20	.V	Q	.	.	.	.
4.333	592.9437	3251.98	.V	Q	.	.	.	.
4.417	615.4887	3273.53	.V	Q	.	.	.	.
4.500	638.1794	3294.68	.V	Q	.	.	.	.
4.583	661.0176	3316.12	.V	Q	.	.	.	.
4.667	684.0035	3337.54	.V	Q	.	.	.	.
4.750	707.1390	3359.27	.V	Q	.	.	.	.
4.833	730.4200	3380.41	. V	Q	.	.	.	.
4.917	753.8103	3396.26	. V	Q	.	.	.	.
5.000	777.2999	3410.69	. V	Q	.	.	.	.
5.083	800.8907	3425.38	. V	Q	.	.	.	.
5.167	824.5826	3440.06	. V	Q	.	.	.	.
5.250	848.3776	3455.04	. V	Q	.	.	.	.
5.333	872.2755	3469.98	. V	Q	.	.	.	.
5.417	896.2784	3485.22	. V	Q	.	.	.	.
5.500	920.3861	3500.44	. V	Q	.	.	.	.
5.583	944.6006	3515.95	. V	Q	.	.	.	.
5.667	968.9220	3531.46	. V	Q	.	.	.	.
5.750	993.3522	3547.27	. V	Q	.	.	.	.
5.833	1017.8914	3563.08	. V	Q	.	.	.	.
5.917	1042.5414	3579.18	. V	Q	.	.	.	.
6.000	1067.3024	3595.29	. V	Q	.	.	.	.
6.083	1092.1764	3611.71	. V	Q	.	.	.	.
6.167	1117.1635	3628.12	. V	Q	.	.	.	.
6.250	1142.2659	3644.86	. V	Q	.	.	.	.
6.333	1167.4835	3661.60	. V	Q	.	.	.	.
6.417	1192.8187	3678.68	. V	Q	.	.	.	.
6.500	1218.2716	3695.75	. V	Q	.	.	.	.
6.583	1243.8445	3713.18	. V	Q	.	.	.	.
6.667	1269.5374	3730.60	. V	Q	.	.	.	.
6.750	1295.3528	3748.40	. V	Q	.	.	.	.
6.833	1321.2906	3766.19	. V	Q	.	.	.	.
6.917	1347.3538	3784.36	. V	Q	.	.	.	.
7.000	1373.5420	3802.53	. V	Q	.	.	.	.
7.083	1399.8468	3819.46	. V	Q	.	.	.	.
7.167	1426.2632	3835.65	. V	Q	.	.	.	.
7.250	1452.7937	3852.24	. V	Q	.	.	.	.
7.333	1479.4385	3868.82	. V	Q	.	.	.	.
7.417	1506.2003	3885.81	. V	Q	.	.	.	.
7.500	1533.0791	3902.81	. V	Q	.	.	.	.
7.583	1560.0779	3920.22	. V	Q	.	.	.	.
7.667	1587.1967	3937.65	. V	Q	.	.	.	.
7.750	1614.4385	3955.51	. V	Q	.	.	.	.
7.833	1641.8033	3973.38	. V	Q	.	.	.	.
7.917	1669.2944	3991.70	. V	Q	.	.	.	.
8.000	1696.9117	4010.03	. V	Q	.	.	.	.
8.083	1724.6586	4028.84	. V	Q.	.	.	.	.
8.167	1752.5350	4047.66	. V	Q.	.	.	.	.
8.250	1780.5444	4066.97	. V	Q.	.	.	.	.
8.333	1808.6869	4086.29	. V	Q.	.	.	.	.
8.417	1836.9661	4106.13	. V	Q.	.	.	.	.
8.500	1865.3820	4125.99	. V	Q.	.	.	.	.
8.583	1893.9382	4146.37	. V	Q.	.	.	.	.
8.667	1922.6351	4166.78	. V	Q.	.	.	.	.
8.750	1951.4763	4187.74	. V	Q.	.	.	.	.

8.833	1980.4620	4208.73	.	V	Q.	.	.	.
8.917	2009.5963	4230.30	.	V	Q.	.	.	.
9.000	2038.8794	4251.90	.	V	Q.	.	.	.
9.083	2068.3154	4274.10	.	V	Q.	.	.	.
9.167	2097.9045	4296.34	.	V	Q.	.	.	.
9.250	2127.6511	4319.21	.	V	Q.	.	.	.
9.333	2157.5554	4342.12	.	V	Q.	.	.	.
9.417	2187.6221	4365.68	.	V	Q.	.	.	.
9.500	2217.8513	4389.30	.	V	Q.	.	.	.
9.583	2248.2480	4413.59	.	V	Q.	.	.	.
9.667	2278.8125	4437.96	.	V	Q.	.	.	.
9.750	2309.5496	4463.03	.	V	Q.	.	.	.
9.833	2340.4600	4488.17	.	V	Q	.	.	.
9.917	2371.5486	4514.05	.	V	Q	.	.	.
10.000	2402.8159	4540.03	.	V	Q	.	.	.
10.083	2434.2676	4566.77	.	V	Q	.	.	.
10.167	2465.9041	4593.62	.	V	Q	.	.	.
10.250	2497.7310	4621.27	.	V	Q	.	.	.
10.333	2529.7490	4649.03	.	V	Q	.	.	.
10.417	2561.9641	4677.64	.	V	Q	.	.	.
10.500	2594.3772	4706.39	.	V	Q	.	.	.
10.583	2626.9944	4736.02	.	V	Q	.	.	.
10.667	2659.8167	4765.80	.	V	Q	.	.	.
10.750	2692.8503	4796.50	.	V	Q	.	.	.
10.833	2726.0967	4827.38	.	V	Q	.	.	.
10.917	2759.5625	4859.23	.	V	Q	.	.	.
11.000	2793.2490	4891.28	.	V	Q	.	.	.
11.083	2827.1633	4924.35	.	V	.Q	.	.	.
11.167	2861.3069	4957.64	.	V	.Q	.	.	.
11.250	2895.6873	4992.01	.	V	.Q	.	.	.
11.333	2930.3059	5026.63	.	V	.Q	.	.	.
11.417	2965.1709	5062.39	.	V	.Q	.	.	.
11.500	3000.2839	5098.43	.	V	.Q	.	.	.
11.583	3035.6536	5135.67	.	V	.Q	.	.	.
11.667	3071.2817	5173.22	.	V	.Q	.	.	.
11.750	3107.1775	5212.05	.	V	.Q	.	.	.
11.833	3143.3430	5251.23	.	V	.Q	.	.	.
11.917	3179.7876	5291.77	.	V	.Q	.	.	.
12.000	3216.5142	5332.70	.	V	.Q	.	.	.
12.083	3253.6157	5387.14	.	V	.Q	.	.	.
12.167	3291.1780	5454.05	.	V	.Q	.	.	.
12.250	3329.2109	5522.38	.	V	.Q	.	.	.
12.333	3367.7170	5591.09	.	V	.Q	.	.	.
12.417	3406.7285	5664.48	.	V	.Q	.	.	.
12.500	3446.3096	5747.18	.	V	.Q	.	.	.
12.583	3486.4746	5831.98	.	V	.Q	.	.	.
12.667	3527.3108	5929.41	.	V	.Q	.	.	.
12.750	3568.9656	6048.29	.	V	.Q	.	.	.
12.833	3611.5530	6183.69	.	V	.Q	.	.	.
12.917	3655.2192	6340.35	.	V	.Q	.	.	.
13.000	3699.9851	6500.01	.	V	.Q	.	.	.
13.083	3745.8699	6662.47	.	V	.Q	.	.	.
13.167	3793.0920	6856.65	.	V	.Q	.	.	.
13.250	3841.4897	7027.36	.	V	.Q	.	.	.
13.333	3891.1204	7206.36	.	V	.Q	.	.	.
13.417	3942.1907	7415.42	.	V	.Q	.	.	.
13.500	3994.5278	7599.37	.	V	.Q	.	.	.
13.583	4048.2075	7794.30	.	V	.Q	.	.	.

13.667	4103.3740	8010.15	. .V Q . . .
13.750	4160.1880	8249.38	. .V Q . . .
13.833	4218.3774	8449.08	. .V Q . . .
13.917	4278.3442	8707.16	. . V Q. . .
14.000	4340.0664	8962.06	. . V Q . .
14.083	4403.8115	9255.81	. . V Q . .
14.167	4469.3486	9516.00	. . V .Q . .
14.250	4536.5508	9757.72	. . V .Q . .
14.333	4605.5752	10022.36	. . V . Q . .
14.417	4676.6802	10324.41	. . V . Q . .
14.500	4749.6006	10588.04	. . V . Q . .
14.583	4824.2944	10845.51	. . V . Q . .
14.667	4900.7915	11107.39	. . V . Q . .
14.750	4979.2017	11385.16	. . V . Q . .
14.833	5059.5439	11665.67	. . V . Q . .
14.917	5141.7935	11942.62	. . V . Q . .
15.000	5225.9463	12219.02	. . V . Q . .
15.083	5312.0151	12497.21	. . V . Q . .
15.167	5400.1626	12799.01	. . V . Q . .
15.250	5490.1182	13061.51	. . V . Q. .
15.333	5581.8325	13316.90	. . V . Q. .
15.417	5675.3301	13575.86	. . V . Q .
15.500	5770.1699	13770.71	. . V . Q .
15.583	5866.4087	13973.88	. . V . .Q .
15.667	5964.1650	14194.25	. . V . .Q .
15.750	6063.5142	14425.48	. . V . . Q .
15.833	6163.9658	14585.60	. . V . . Q .
15.917	6266.0103	14816.84	. . V . . Q .
16.000	6369.5967	15040.78	. . V . . Q .
16.083	6475.6421	15397.82	. . V . . Q .
16.167	6583.4258	15650.19	. . V . . Q .
16.250	6691.5322	15697.03	. . V . . Q .
16.333	6800.1333	15768.86	. . V. . Q .
16.417	6909.7832	15921.17	. . V. . Q .
16.500	7020.3618	16056.00	. . V. . Q .
16.583	7131.4580	16131.14	. . V . Q .
16.667	7244.1226	16358.87	. . V . Q .
16.750	7358.6919	16635.49	. . V . Q .
16.833	7474.9712	16883.74	. . .V . Q .
16.917	7592.8574	17117.10	. . .V . Q .
17.000	7710.7734	17121.40	. . .V . Q .
17.083	7828.4272	17083.33	. . . V . Q .
17.167	7948.6514	17456.53	. . . V . Q.
17.250	8066.3013	17082.74	. . . V . Q .
17.333	8184.3281	17137.47	. . . V . Q .
17.417	8303.7744	17343.61	. . . V . Q .
17.500	8421.1650	17045.13	. . . V . Q .
17.583	8539.5156	17184.46	. . . V . Q .
17.667	8659.3066	17393.60	. . . V . Q .
17.750	8780.1465	17546.00	. . . V . Q.
17.833	8897.6318	17058.81	. . . V . Q .
17.917	9019.9473	17760.25	. . . V . Q.
18.000	9141.6680	17673.85	. . . V . Q.
18.083	9264.6309	17854.24	. . . V . Q.
18.167	9382.4355	17105.19	. . . V . Q .
18.250	9499.0430	16931.41	. . . V . Q .
18.333	9617.8721	17253.95	. . . V . Q .
18.417	9739.0205	17590.76	. . . V . Q.

18.500	9855.4463	16905.01	. . . V . Q .
18.583	9970.6045	16721.02	. . . V . Q .
18.667	10084.2861	16506.52	. . . V . Q .
18.750	10196.6016	16308.20	. . . V . Q .
18.833	10306.8213	16003.90	. . . V. Q .
18.917	10413.4609	15484.11	. . . V. Q .
19.000	10518.6611	15275.10	. . . V. Q .
19.083	10622.2334	15038.67	. . . V. Q .
19.167	10723.2539	14668.20	. . . V Q .
19.250	10821.7881	14307.19	. . . VQ .
19.333	10917.2656	13863.37	. . . Q .
19.417	11009.5137	13394.41	. . . Q.V .
19.500	11098.7793	12961.40	. . . Q .V .
19.583	11185.7773	12632.08	. . . Q .V .
19.667	11270.2207	12261.18	. . . Q .V .
19.750	11352.2842	11915.61	. . . Q . V .
19.833	11432.0742	11585.53	. . . Q . V .
19.917	11509.3525	11220.76	. . . Q . V .
20.000	11584.0391	10844.48	. . . Q . V .
20.083	11655.2891	10345.52	. . . Q . V .
20.167	11724.2178	10008.50	. . . Q . V .
20.250	11791.1826	9723.27	. . .Q . V .
20.333	11855.9014	9397.10	. . Q . V .
20.417	11917.6875	8971.33	. . Q . V .
20.500	11977.5615	8693.76	. . Q. . V .
20.583	12035.6816	8439.05	. . Q . . V .
20.667	12092.1270	8195.88	. . Q . . V .
20.750	12146.8281	7942.59	. . Q . . V .
20.833	12199.7344	7682.03	. . Q . . V .
20.917	12250.3613	7351.09	. . Q . . V .
21.000	12299.3799	7117.55	. . Q . . V .
21.083	12347.0459	6921.11	. . Q . . V .
21.167	12393.4443	6737.08	. . Q . . V .
21.250	12438.5566	6550.29	. . Q . . V .
21.333	12482.4492	6373.24	. . Q . . V .
21.417	12525.2529	6215.12	. . Q . . V .
21.500	12567.0605	6070.49	. . Q . . V .
21.583	12607.8994	5929.75	. . Q . . V .
21.667	12647.8096	5794.97	. . Q . . V .
21.750	12686.8066	5662.36	. . Q . . V .
21.833	12724.9248	5534.71	. . Q . . V .
21.917	12762.2578	5420.82	. . Q . . V .
22.000	12798.8564	5314.11	. .Q . . V .
22.083	12834.8008	5219.12	. .Q . . V .
22.167	12870.1191	5128.28	. .Q . . V .
22.250	12904.8262	5039.43	. .Q . . V .
22.333	12938.9492	4954.69	. .Q . . V .
22.417	12972.5811	4883.29	. Q . . V .
22.500	13005.7480	4815.90	. Q . . V .
22.583	13038.4590	4749.58	. Q . . V .
22.667	13070.7197	4684.21	. Q . . V .
22.750	13102.5469	4621.30	. Q . . V .
22.833	13133.9561	4560.63	. Q . . V .
22.917	13165.0039	4508.08	. Q . . V .
23.000	13195.6885	4455.38	. Q. . . V .
23.083	13225.7939	4371.33	. Q. . . V .
23.167	13255.4727	4309.40	. Q. . . V .
23.250	13284.8447	4264.81	. Q. . . V .

23.333	13313.9229	4222.15	.	Q.	.	.	V .
23.417	13342.6914	4177.22	.	Q.	.	.	V .
23.500	13371.1445	4131.33	.	Q.	.	.	V .
23.583	13399.2852	4086.08	.	Q.	.	.	V .
23.667	13427.1191	4041.43	.	Q.	.	.	V .
23.750	13454.6494	3997.38	.	Q .	.	.	V .
23.833	13481.8799	3953.93	.	Q .	.	.	V .
23.917	13508.8154	3911.08	.	Q .	.	.	V .
24.000	13535.4600	3868.78	.	Q .	.	.	V .
24.083	13561.7891	3822.94	.	Q .	.	.	V .
24.167	13587.7676	3772.11	.	Q .	.	.	V .
24.250	13613.4023	3722.17	.	Q .	.	.	V .
24.333	13638.6992	3673.08	.	Q .	.	.	V .
24.417	13663.6504	3622.91	.	Q .	.	.	V .
24.500	13688.2246	3568.20	.	Q .	.	.	V .
24.583	13712.4258	3513.96	.	Q .	.	.	V .
24.667	13736.2080	3453.15	.	Q .	.	.	V .
24.750	13759.4951	3381.24	.	Q .	.	.	V .
24.833	13782.2256	3300.42	.	Q .	.	.	V .
24.917	13804.3232	3208.64	.	Q .	.	.	V .
25.000	13825.7842	3116.08	.	Q .	.	.	V.
25.083	13846.6270	3026.34	.	Q .	.	.	V.
25.167	13866.7363	2919.84	.	Q .	.	.	V.
25.250	13886.2217	2829.33	.	Q .	.	.	V.
25.333	13905.0566	2734.79	.	Q .	.	.	V.
25.417	13923.1289	2624.16	.	Q .	.	.	V.
25.500	13940.5498	2529.56	.	Q .	.	.	V.
25.583	13957.2871	2430.32	.	Q .	.	.	V.
25.667	13973.2617	2319.48	.	Q .	.	.	V.
25.750	13988.3896	2196.65	.	Q .	.	.	V.
25.833	14002.8418	2098.51	.	Q .	.	.	V.
25.917	14016.3906	1967.34	.	Q .	.	.	V.
26.000	14029.0566	1839.17	.	Q .	.	.	V.
26.083	14040.7500	1697.94	.	Q .	.	.	V.
26.167	14051.6729	1586.00	.	Q .	.	.	V.
26.250	14061.9102	1486.52	.	Q .	.	.	V.
26.333	14071.3711	1373.74	.	Q .	.	.	V.
26.417	14079.9258	1242.12	.	Q .	.	.	V.
26.500	14087.7773	1140.05	.	Q .	.	.	V.
26.583	14094.9619	1043.15	.	Q .	.	.	V.
26.667	14101.5186	952.03	.	Q .	.	.	V.
26.750	14107.4814	865.78	.	Q .	.	.	V.
26.833	14112.9102	788.18	.	Q .	.	.	V.
26.917	14117.9102	726.04	.	Q .	.	.	V.
27.000	14122.4854	664.31	.	Q .	.	.	V.
27.083	14126.6270	601.42	.	Q .	.	.	V.
27.167	14130.3711	543.70	.	Q .	.	.	V.
27.250	14133.7510	490.80	.	Q .	.	.	V.
27.333	14136.8125	444.60	Q	.	.	.	V.
27.417	14139.5928	403.73	Q	.	.	.	V.
27.500	14142.1406	370.00	Q	.	.	.	V.
27.583	14144.4678	337.96	Q	.	.	.	V.
27.667	14146.5918	308.47	Q	.	.	.	V.
27.750	14148.5186	279.75	Q	.	.	.	V.
27.833	14150.2588	252.66	Q	.	.	.	V.
27.917	14151.8213	226.83	Q	.	.	.	V.
28.000	14153.2139	202.19	Q	.	.	.	V.
28.083	14154.4795	183.74	Q	.	.	.	V.

28.167	14155.6260	166.43	Q	.	.	.	V.
28.250	14156.6533	149.23	Q	.	.	.	V.
28.333	14157.5723	133.38	Q	.	.	.	V.
28.417	14158.4141	122.16	Q	.	.	.	V.
28.500	14159.1816	111.40	Q	.	.	.	V.
28.583	14159.8750	100.71	Q	.	.	.	V.
28.667	14160.4951	90.10	Q	.	.	.	V.
28.750	14161.0430	79.56	Q	.	.	.	V.
28.833	14161.5225	69.66	Q	.	.	.	V.
28.917	14161.9727	65.39	Q	.	.	.	V.
29.000	14162.4033	62.56	Q	.	.	.	V.
29.083	14162.8154	59.78	Q	.	.	.	V.
29.167	14163.2080	57.00	Q	.	.	.	V.
29.250	14163.5811	54.23	Q	.	.	.	V.
29.333	14163.9355	51.51	Q	.	.	.	V.
29.417	14164.2715	48.79	Q	.	.	.	V.
29.500	14164.5889	46.09	Q	.	.	.	V.
29.583	14164.8877	43.43	Q	.	.	.	V.
29.667	14165.1689	40.77	Q	.	.	.	V.
29.750	14165.4316	38.13	Q	.	.	.	V.
29.833	14165.6758	35.51	Q	.	.	.	V.
29.917	14165.9023	32.93	Q	.	.	.	V.
30.000	14166.1113	30.34	Q	.	.	.	V.
30.083	14166.3027	27.79	Q	.	.	.	V.
30.167	14166.4766	25.25	Q	.	.	.	V.
30.250	14166.6328	22.73	Q	.	.	.	V.
30.333	14166.7725	20.23	Q	.	.	.	V.
30.417	14166.8945	17.74	Q	.	.	.	V.
30.500	14167.0000	15.27	Q	.	.	.	V.
30.583	14167.0879	12.81	Q	.	.	.	V.
30.667	14167.1592	10.37	Q	.	.	.	V.
30.750	14167.2139	7.94	Q	.	.	.	V.
30.833	14167.2520	5.53	Q	.	.	.	V.
30.917	14167.2734	3.13	Q	.	.	.	V.
31.000	14167.2783	0.75	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%	1860.0
10%	1425.0
20%	1115.0
30%	595.0
40%	460.0
50%	390.0
60%	330.0
70%	270.0
80%	215.0
90%	135.0

END OF FLOODSCx ROUTING ANALYSIS

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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 126                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 50-YR EV DEC 2022 ROKAMOTO                                             *
 **************************************************************************

  FILE NAME: EV50126S.DAT
  TIME/DATE OF STUDY: 15:49 12/12/2022


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    126.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   50438.699 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.130 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.298; LOW LOSS FRACTION = 0.403
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.46; 30-MINUTE =  0.87;  1-HOUR =  1.21
    3-HOUR =  2.27;    6-HOUR =  3.38; 24-HOUR =  5.95
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.341; 30-MINUTE = 0.392;  1-HOUR = 0.432
    3-HOUR = 0.782;    6-HOUR = 0.902; 24-HOUR = 0.943
==========================================================================
```



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 +-------------------------------------------------------------------------------
-------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV50126S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     126.00| Subarea (UH) Added to Stream #1|       0.0     17785.3|
18.167 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
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                        Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 127                                *
* PHASE NO PA45 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL             *
* 50-YR EV MAY 2023 ROKAMOTO                                             *
 **************************************************************************

  FILE NAME: EV50127S.DAT
  TIME/DATE OF STUDY: 07:12 05/13/2023


                       ** INPUT SUMMARY **


**************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    127.00 IS CODE =   1
--------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
==========================================================================
  WATERSHED AREA =   53506.199 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.246 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.287; LOW LOSS FRACTION = 0.416
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.45; 30-MINUTE =  0.87;  1-HOUR =  1.20
    3-HOUR =  2.24;    6-HOUR =  3.33; 24-HOUR =  5.85
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.331; 30-MINUTE = 0.383;  1-HOUR = 0.424
    3-HOUR = 0.773;    6-HOUR = 0.898; 24-HOUR = 0.941
==========================================================================
```



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 +-------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV50127S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     127.00| Subarea (UH) Added to Stream #1|       0.0     17807.0|
18.250 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
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   END OF FLOODSCx ROUTING ANALYSIS
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                       Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 137                                *
* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL              *
* 50-YR EV AUG 2023 ROKAMOTO                                             *
 ************************************************************************

  FILE NAME: EV50137S.DAT
  TIME/DATE OF STUDY: 13:25 08/10/2023


                        ** INPUT SUMMARY **


*************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    137.00 IS CODE =   1
-------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
=========================================================================
  WATERSHED AREA =   67798.297 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.601 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.285; LOW LOSS FRACTION = 0.417
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.44; 30-MINUTE =  0.85;  1-HOUR =  1.17
    3-HOUR =  2.14;    6-HOUR =  3.15; 24-HOUR =  5.48
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.291; 30-MINUTE = 0.350;  1-HOUR = 0.394
    3-HOUR = 0.738;    6-HOUR = 0.886; 24-HOUR = 0.933
=========================================================================
```



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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV50137S.DAT   ]
Page:   1 of    |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|            |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     137.00| Subarea (UH) Added to Stream #1|       0.0     20082.6|
18.167 |             |           |
 +---------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                           |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                   |
 +--------------------------------------------------------------------------------
------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
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                           Analysis prepared by:





 ************************** DESCRIPTION OF STUDY **************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 138                                  *
* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL                *
* 50-YR EV AUG 2023 ROKAMOTO                                               *
 **************************************************************************

  FILE NAME: EV50138S.DAT
  TIME/DATE OF STUDY: 13:24 08/10/2023


                          ** INPUT SUMMARY **


****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    138.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
============================================================================
  WATERSHED AREA =   69102.000 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.690 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284; LOW LOSS FRACTION = 0.418
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.44; 30-MINUTE =  0.85;  1-HOUR =  1.17
    3-HOUR =  2.14;    6-HOUR =  3.13; 24-HOUR =  5.46
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.287; 30-MINUTE = 0.348;  1-HOUR = 0.392
    3-HOUR = 0.734;    6-HOUR = 0.885; 24-HOUR = 0.932
============================================================================
```



```
 +--------------------------------------------------------------------------
--------------------------------------+
 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV50138S.DAT   ]
Page:   1 of    |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     138.00| Subarea (UH) Added to Stream #1|       0.0     20183.4|
18.250 |             |           |
 +--------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                              |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                      |
 +--------------------------------------------------------------------------
--------------------------------------+


   END OF FLOODSCx ROUTING ANALYSIS
```

```
_____
*****************************************************************************

             F L O O D    R O U T I N G    A N A L Y S I S
             USING COUNTY HYDROLOGY MANUAL OF ORANGE(1986)
         (c) Copyright 1989-2010 Advanced Engineering Software (aes)
             Ver. 17.0  Release Date: 07/01/2010  License ID 1527

                         Analysis prepared by:




 ************************* DESCRIPTION OF STUDY *************************
* RMV PA-3 ROMP AMENDMENT 2022 - NODE 139                                *
* PHASE NO PA5 REGIONAL UNIT HYDROGRAPH - SINGLE AREA MODEL              *
* 50-YR EV AUG 2023 ROKAMOTO                                             *
 ************************************************************************

  FILE NAME: EV50139S.DAT
  TIME/DATE OF STUDY: 13:24 08/10/2023


                        ** INPUT SUMMARY **


*****************************************************************************
  FLOW PROCESS FROM NODE  10100.00 TO NODE    139.00 IS CODE =   1
-----------------------------------------------------------------------------
  >>>>>SUBAREA RUNOFF (UNIT-HYDROGRAPH ANALYSIS) ADDED TO STREAM #1<<<<<
=============================================================================
  WATERSHED AREA =   69529.797 ACRES; BASEFLOW =   0.000 CFS/SQUARE-MILE
  *USER ENTERED "LAG" TIME =    2.739 HOURS
  VALLEY(DEVELOPED) S-GRAPH SELECTED
  MAXIMUM WATERSHED LOSS RATE(INCH/HOUR) =  0.284; LOW LOSS FRACTION = 0.418
  SPECIFIED PEAK RAINFALL DEPTHS(INCH):
  5-MINUTE =  0.44; 30-MINUTE =  0.85;  1-HOUR =  1.17
    3-HOUR =  2.14;    6-HOUR =  3.13; 24-HOUR =  5.45
  *USER SPECIFIED PRECIPITATION DEPTH-AREA REDUCTION FACTORS:
  5-MINUTE = 0.286; 30-MINUTE = 0.348;  1-HOUR = 0.391
    3-HOUR = 0.733;    6-HOUR = 0.885; 24-HOUR = 0.932
=============================================================================
```



```
 +-------------------------------------------------------------------------------
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 |                                      * AES FLOODSCx PROGRAM RESULTS SUMMARY *
|
 |INPUT FILENAME: [EV50139S.DAT   ]
Page:   1 of    |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |UPSTREAM  DOWNSTREAM|                                | UPSTREAM   DOWNSTREAM|
TIME(2) TO | MAX. STORAGE|           |
 | NODE #     NODE #  | HYDROLOGIC/HYDRAULIC PROCESS   |PEAK (CFS)  PEAK (CFS)|
PEAK (HR)  | MODELED (AF)| FOOTNOTES |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 | 10100.00     139.00| Subarea (UH) Added to Stream #1|       0.0     20114.8|
18.333 |             |           |
 +-------------------+--------------------------------+----------------------+-
-----------+-------------+-----------+
 |Notes: 1 = BASIN MODEL VOLUME EXCEEDED; 2 = TIME IS AT END OF 5-MINUTE UNIT
INTERVAL                                |
 |       3 = RUNOFF ESTIMATES DO NOT EXTEND PAST 2 DAYS AFTER THE PEAK DAY OF
THE DESIGN STORM                        |
 +-------------------------------------------------------------------------------
-------------------------------------+

   END OF FLOODSCx ROUTING ANALYSIS
```